

American Persimmon

Introduction

The American or common persimmon, *Diospyros virginiana*, is a slow growing, moderately sized tree native to Kentucky. Fruit are about 1 to 2 inches in diameter. Unripe fruit, which is high in tannins, has a bitter astringent flavor. The golden orange to red fruit are very sweet when fully ripened and astringency is reduced. Cultivated varieties may have improved quality and lose their astringency earlier in the fall.

Marketing and Market Outlook

The Asian persimmon is more commonly grown commercially in the U.S.; however, efforts in some states, including Indiana, have been underway to commercialize the American persimmon. These trees are normally sold by nurseries that specialize in less common fruits and nuts.

Fruit are usually marketed fresh and persimmons are occasionally found at farmers markets across Kentucky. The “slow foods movement” has increased interest in this crop. The fruit can also be processed and the pulp sold as a frozen product. Value-added products include persimmon puddings, cookies, cakes, custards, ice creams, sherbets, and preserves. Fruit may also be dried. Producers marketing persimmons at farmers markets and other direct marketing channels should provide persimmon storage, ripening and use information as many consumers are unfamiliar with the crop. Product sampling in direct markets could be particularly effective.

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Production Considerations

Cultivar selection

Persimmon cultivars vary in fruit color, size, shape, and astringency. Earliness and tree size may also differ between varieties. Fruit of most varieties contain black flecks in the pulp, which are not attractive in the processed product. ‘Meader,’ ‘Killen,’ ‘Morris Burton,’ and ‘C-100’ are varieties that contain few or no black specks.

Persimmons are normally dioecious; that is, trees produce either male or female flowers on separate trees. These self-infertile trees will require cross pollination with another variety to produce fruit. There is a 90-chromosome American persimmon that is native to the northern U.S. and a 60-chromosome type that is native to Kentucky and the southern U.S. Most of the named varieties are of the 90-chromosome type. When named varieties of the 90-chromosome type are grown in Kentucky and are pollinated by the 60-chromosome type the seeds abort and many of the fruit are seedless or have few seeds. A few American persimmons, such as ‘Meader,’ are self-fruitful and will set seedless fruit.

Site selection, planting, and maintenance

Persimmon is a very adaptable tree, surviving on everything from poor sites to river bottoms, and from partial shade to full sun. However, for best growth and fruit production, moist, well-drained loamy soils and sunny sites are best. Avoid waterlogged soils, as well as those that are droughty. Production on elevated sites permits a longer freeze-free production period.

Persimmon can be propagated from seeds, cuttings, suckers, and grafts. Plants can be easily produced from seed after a 3-month period of seed stratification. Seedlings that are one to two years old may be transplanted to the orchard. To ensure high quality plants and fruit, however, it is best to plant grafted or budded trees. Persimmon has a long taproot that can make transplanting more difficult. Orchard spacing is determined by the variety.

Young plants should be well-watered to aid in establishment; mature trees are somewhat drought-tolerant. Persimmon trees, which are pruned to open center or modified central leader, require little pruning once they reach bearing size.

Pest management

Persimmon is generally considered free of most pests and diseases, although a few problems have been known to occur. Insect pests include psyllid, persimmon borer, fall webworm, bagworm, hickory horned devil, and twig girdler. The ambrosia beetle is a new pest that is moving into the state and could be a problem, particularly on weak trees. There is interest in varieties that have leaf spot resistance. Persimmon wilt, a fungal disease due to *Cephalosporium diospyri*, has caused considerable damage in the south, including Tennessee; it may also be present in Kentucky. Songbirds, raccoons, squirrels, and deer are some of the animals that will feed on persimmon fruit.

Harvest and storage

Persimmon trees propagated from seeds begin producing a crop in about 4 to 9 years, while

grafted trees can begin fruiting 3 years after planting. It may take as many as 10 years for trees to come into full production. Fruit is hand-picked with care to maintain the cap on the fruit if it is to be marketed fresh. Fruit needs to be handled gently to avoid bruising. Bearing trees may yield 35 to 75 pounds of fresh fruit per tree.

Mature fruit may be yellow, orange, bright red, or blue in color. Fruit becomes soft and mushy while ripening. It is popularly believed that a hard frost is required to sweeten the fruit, but actually persimmons just require a long period for ripening. Edible fruits often hang on the trees through fall, and even into winter, unaffected by freezing temperatures.

Persimmons can be stored just above freezing for approximately 3 months. Ripe fruit that is still astringent can be treated with ethylene or frozen to eliminate the astringency. Drying also removes astringency.

Labor requirements

Labor needs per acre are approximately 60 hours for production, 140 hours for harvest, and 60 hours for packing/grading.

Economic Considerations

Initial investments include land preparation, the purchase of seedlings or grafted trees, and possibly the installation of an irrigation system.

Establishment costs over 3 years for one acre of persimmons are estimated at \$8,000. These costs presume 300 trees per acre at a wholesale cost of \$20 per tree. Smaller plantings typically involve higher per-tree costs from the nursery. Production costs after Year 4 are estimated at \$1,200 per acre, with harvest and marketing costs at \$2,250 per acre. This is equal to \$2.30 in total costs per pound of persimmon production. Presuming gross returns of \$4,125 per acre, or 1,500 pounds at \$2.75 per pound, returns to land, capital, and management would be approximately \$675 per acre or \$0.45 per pound. Growers may be able to reach similar returns for a smaller, well-

managed persimmon planting with well-targeted niche marketing.

Returns will vary widely depending on the market and product use. Prospective growers are encouraged to carefully forecast revenues based on marketable yields and product utilization.

Selected Resources

- Common Persimmon (U.S. Forest Service, North Eastern Area)
http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/diospyros/virginiana.htm
- Common Persimmon Plant Guide (PLANTS Database, USDA NRCS, 2006)
http://plants.usda.gov/plantguide/pdf/pg_divi5.pdf

- Horticultural Improvement of the American Persimmon (The Persimmon Patch, 2007)
http://www.simmonfruit.net/persimmon_improvement.html
- Persimmon (Virginia Tech, 2001)
<http://www.sfp.forprod.vt.edu/factsheets/persimmon.pdf>
- Persimmons: An Over-View of Cultivars, Production, Harvesting, and Marketing (Washington State University) 10.68 MB file
<http://ucce.ucdavis.edu/files/datastore/391-472.pdf>
- Persimmons, Asian and American (ATTRA, 2010)
<https://attra.ncat.org/attra-pub/summaries/summary.php?pub=10>

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September 2011

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Photos by Frank Bonner, U.S. Forest Service (fruit) & Rasbak, Wikimedia Commons (blossom)

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