Minor Fruit Lacking Commercial Potential in Kentucky

**INTRODUCTION**

Over the years, growers and county Extension agents have inquired about a number of different small fruits, questioning if these crops could be grown in Kentucky. A few of these crops have potential, while many others are either completely unsuitable for production here or they are unreliable from year to year. This profile discusses some of the pros and cons of producing this latter group of small fruit. The purpose is to communicate the reasons these unique berries are not generally recommended for commercial production in the Commonwealth.

**BOYSENBERRY, LOGANBERRY, YOUNGBERRY, OLALLIE BLACKBERRY & MARIONBERRY**

These bramble fruit (*Rubus* spp.) represent various crosses between the Pacific blackberry and red raspberry. The very large, deep reddish-black fruit is similar in appearance to a blackberry. Fruit is eaten fresh or processed into jams, syrups, wine, and various baked goods. The trailing canes, which may be thorny or thornless depending on the cultivar, require a trellis for support. Current production is primarily in the Western U.S., particularly California and Oregon. The boysenberry brought fame and fortune to Knott’s Berry Farm in California.

**Pros**

These berry crops are versatile and can be canned or preserved in jams, jellies, and syrups, as well as eaten fresh. They are very flavorful, high quality fruit that would make an interesting addition to fresh market sales and value-added product lines.

**Cons**

Unfortunately, these crops are not very winter hardy in Kentucky and, as such, are not recommended. Growers willing to go to the expense and trouble of protecting plants against winter injury could have success some years, but production would likely be inconsistent and unreliable from year to year. The fruit have a very short shelf life and need to be consumed or processed within 2 to 3 days of harvest.

**CRANBERRY**

Cranberry (*Vaccinium macrocarpon*) is a perennial evergreen vine with a prostrate growth habit. The small, red, smooth fruit is round to elliptical in shape. Berries are marketed fresh, dried, canned, and processed as a juice or cranberry sauce.

**Cons**

Cranberries have very specific growth requirements, which include acid peat soil, abundant water, and a dormancy period with sufficient chill hours for fruit production. These conditions can be met only in northern states, such as Wisconsin, Massachusetts, New Jersey, Oregon, and Washington. Cranberries are grown in marshes or bogs in these states. In
addition, Kentucky’s high temperatures and humidity during the growing season make disease control difficult. This crop is not suitable for Kentucky.

**Goji Berry**

Goji berries (*Lycium barbarum* and *L. chinense*) are deciduous woody shrubs in the Solanaceous family. Alternate common names include wolfberry, Tibetan goji berry, matrimony vine, Chinese boxthorn, and red medlar. Plants, which reach a height of 8 to 10 feet at maturity, come into full production after about 4 to 5 years. The red elliptical ½- to 1-inch berries, which are high in nutrient and antioxidant content, are being hailed as a “super fruit.” A number of scientifically unsupported marketing claims link goji berry to various general health benefits, as well as reporting it as a cure for a range of medical conditions and diseases. Currently most commercial goji berry production takes place in China. Fruit can be eaten fresh or dried; however, only dried or processed goji berries can be imported into the U.S. Domestic production could make a fresh product available. Several Kentucky growers have reported attempting goji production, but they have not been able to make this crop commercially viable.

**Pros**

This crop is believed to be well-suited to Kentucky conditions and should do well here. Plants are relatively disease- and insect-free and, reportedly, easy to grow. Imported goji is a high value product. Since fresh goji is not available in the U.S., goji berries are viewed as a potentially lucrative niche crop. While the fresh product has a relative short shelf-life, unsold fresh fruit could be dried or processed.

**Cons**

Despite the supposition that goji should grow well in Kentucky, little is actually known regarding the specifics of producing this crop commercially here. Plants can be variable in growth habit, yields, and fruit quality. Deer, which like the taste of goji plants, can cause considerable damage. Plants are tender and not adaptable for machine harvest. Labor costs of hand harvesting the small berries over a long period of time are likely to greatly impact profit; thus presenting a significant obstacle to goji becoming a commercially successful crop in Kentucky.

**Hardy Kiwi**

Hardy kiwi (*Actinidia arguta*) is a winter tolerant relative to the kiwifruit available at local grocers. Similar to kiwifruit in flavor and interior appearance, hardy kiwi is smooth-skinned and about the size of a large table grape. Fruit are produced on perennial climbing vines that may grow to 40 feet long. Other names include baby kiwi, wild fig, and wee-kee.

**Pros**

Hardy kiwi is a novel fruit that could appeal to consumers. Plants are tolerant to winter temperatures as low as minus 25°F. This crop is relatively free from disease and insect problems.

**Cons**

Hardy kiwi may not flower until the 3rd to 5th year and will initially produce a small crop. While plants can tolerate low winter temperatures, they are slow to acclimate to cold weather. Sudden drops in temperature can result in damage to vines. In addition, plants are sensitive to late spring frost, which can kill flower-producing shoots. Pollination problems can result in poor fruit set. Hardy kiwi production requires a substantial trellis system to support the vines. The cost of establishing a planting, along with its sensitivity to frost injury, make hardy kiwi a questionable crop for commercial production in Kentucky.

**Mulberry**

Red mulberry (*Morus rubra*) is native to North America; however, black (*Morus nigra*), and white (*Morus alba*) species can also be grown here. These deciduous trees produce fruit that resemble a slender blackberry. Fruit is consumed fresh or used for jelly, wines, and desserts.

**Pros**

Mulberry trees grow well on a wide range of well-drained soils, including marginal lands unsuitable
for other crops or tree fruits. Not sensitive to frost, mulberries can even be planted in frost pockets. Plants are easy to transplant and establish. Mulberries are tolerant of drought, and few diseases or pests cause serious problems.

**Cons**
Mulberries are often classified as an invasive, weedy, messy tree. White mulberry is reportedly the second most common weed tree in New York City. While few disease and insect pests plague mulberries, the fruit attracts large numbers of birds. Trees require heavy pruning to maintain a suitable tree size for harvesting fruit.

**NANKING CHERRY**
Nanking cherry (*Prunus tomentosa*) is also known as Chinese bush cherry, Manchu cherry, and Hansen’s bush cherry. Plants reach a height of 9 to 15 feet, taking the form of a spreading shrub or small tree. Fruit can be quite variable depending on the cultivar. Fruit size is generally from ¼ to ½ inch across, but occasionally may be as large as 1 inch; color is typically bright red, but some cultivars are pink or white; and flavor can vary from tart to sweet. Fruit, which has a single cherry-like pit, may ripen from early to late summer. These cherries can be consumed fresh or used in juices, jams, wines, pies, and other value-added products.

**Pros**
Nanking cherry, which is quite hardy in Kentucky, is an early bloomer that is also somewhat frost tolerant. It flowers regularly, commonly setting a full crop of fruit once bushes come into bearing the third season. While it is susceptible to the usual diseases occurring on stone fruits, it is less affected than other species in that genus (*Prunus*). Nanking cherry is drought tolerant.

**Cons**
Nanking cherry is more suitable as an ornamental or for a backyard fruit planting than it is for commercial production. The tiny fruit are tedious to pit, are too soft for shipping, and have a short shelf life. The fruit, which is considered inferior to both commercial tart and sweet cherries, has little to no market potential.

**SELECTED RESOURCES**

*On the Web*
- How Cranberries Grow (Cape Cod Cranberry Growers Association) http://www.cranberries.org/cranberries/growing.html
- Mulberry (California Rare Fruit Growers, Inc., 1997) http://www.crgf.org/pubs/ff/mulberry.html

*In print*