

Uncommon Fruit Plants: Potential for Commercialization in New York

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Various uncommon fruit producing trees, shrubs, and vines are being considered or tried by growers as alternatives over the more traditional fruit crops. Select retail and commercial nurseries offer a group of edible fruit varieties chosen for good flavor, showiness in the landscape, cold and disease resistance, and general ease of growing. Most people are not aware that many of the less common fruits are also more nutritious than the popular fruits. Some of them are native to the US, and some have been imported.

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General advantages of uncommon fruits are:

- No competition and higher prices paid to producers.
- Publicity and notoriety that comes from the uniqueness of growing an ‘oddity’.
- Possibilities for unique packaging and value-added opportunities.

Disadvantages of uncommon fruit are:

- Most fruit specialists have had limited experiences with the crop, and pest control or cultivation practices recommendations may be unavailable.
- The public is unfamiliar with the fruit, so special marketing strategies are needed.
- Storage and ripening recommendations may be unavailable.

This article summarizes observations I have made in the northeast for selected plants and incorporates comments from growers who have tried raising the plants on a trial commercial basis. I will review the benefits and challenges of the crops considering cultural practices, quality of product, and marketability/marketing options. My top choices include the following crops: persimmons, Cornelian cherries, elderberry, honeyberry, gooseberry, and possibly hardy kiwi. More information is available on the internet, in nursery catalogs, and in Lee Reich’s book, *Uncommon Fruits for Every Garden*.

Trees

Persimmons (*Diospyros virginiana*).

American persimmon fruits are small to medium-sized, and must be ripened and eaten soft to remove astringency (Figure 1). They are much more fragrant and flavorful than the common ‘Fuyu,’ and ‘Hachiya’ varieties grown on the west coast. Trees are medium-sized, slow growing, and free of pest problems. Trees are usually partially self fertile, but benefit from cross-pollination. The fruits lend themselves to packaging in quart baskets, and should have consumer education material about ripening. ‘Prok’ and ‘Szukis’ are two varieties recommended for fruit quality and plant hardiness in the northeast.

Paw Paws (*Asimina triloba*). Trees are hard to transplant and seedlings benefit from shade (Figure 2a). The very slow-growing, large trees are slow to bear, but fruit is delectable with tropical fruit (Annona) flavor. There are many varieties that have different colored flesh; all are filled with large black seeds (Figure 2b). Fruit needs to be soft to eat. They could be tray-packed or packed in baskets.

Mulberries (*Morus spp.*) Fruits are like blackberries, but less acidic and fragile coming in red, black, or white colors (Figure 3). Be sure varieties you choose are cold tolerant. Selected trees have larger-sized fruit than those that come up wild. Trees are fast growing. Fruit would be best shaken from the tree and collected on tarps. One disadvantage is that fruits ripen over a two to four week period, so harvest is labor intensive. Berries would probably best be sold frozen, or already made into processed products due to their fragile nature and damage sustained during harvest.

Medlar (*Mespilus germanica*). Small tree bears plum-sized fruit in three to four years (Figure 4). Fruits soften on the tree to become edible and have an applesauce texture and flavor. Trees are heavy producers. Fruits vary in size, but the ‘Breda Giant’ variety has produced fruits up to seven cm in diameter. This fruit has an interesting history as a common home garden fruit, and it appears often in old European paintings.

Cornelian Cherries (*Cornus mas*). The plant is a bush to small-sized tree. It is related to Dogwood, and the tree is a similar size. Large fruited varieties from Russia are now available. ‘Red Star’ and ‘Sunrise’ are recommended varieties. The fruits have a pear shape or are oval with high



Persimmon fruit.

acid content (Figure 5). As fruits soften, they become sweeter and more palatable, but have a shorter shelf life. If the climate is moist with rain or high humidity, leaves can become spotted or shrivel entirely with a fungus disease. When choosing varieties, select those that are disease resistant if at all possible. This is a fruit that can be packed in baskets, and has an untapped ethnic market. Plants are hardy to minus 34° C.

Mountain Ash (*Sorbus spp*). The plant is a 12-15 foot tree with yellow to red showy fruit (Figure 6). Fruit is often bitter and needs processing, but is commonly used for making jelly and liquor. ‘Rabina’ is recommended as a producer of fresh fruit that can be eaten raw. This fruit grows at the tips of branches and would be a challenge to hand-harvest. Training and pruning of the tree would help with ease of harvest. The fruit will probably be best sold as processed products.

Shipova (*Sorbus aucuparia X Pyrus spp*). A hybrid of pear and mountain ash that produces a small to medium-sized tree with delicately flavored fruit similar to a small pear (Figure 7). Fruits must be soft-ripe to eat. One advantage over common pear varieties would be the disease and cold resistance of the plants. The fruits are small (large plum-sized) and could be marketed in baskets.

Shrubs

Aronia (*Aronia melanocarpa*). This shrub grows rapidly and suckers profusely. It produces the highest antioxidant fruit which is astringent and sour, but when processed has a great flavor which is also good blended (Figure 8). Commercially, the fruit would need to be machine harvested and would probably not be sold fresh. Plants are not commonly found in commercial quantities, and they are very high-priced considering how easy they are to propagate.

Elderberry (*Sambucus nigrum*). The flowers and fruits of this shrub are edible, useful in processed products, and very high in antioxidants (Figure 9). Both flowers and berries can be sold and used fresh. Elderberry is touted by some as the new natural cold remedy since it does not have the side effects that Echinaceae does. This use is expected to increase demand for this fruit which yields up to 10 or 12 tons of fruit per acre. The plants can be trained and pruned as a bush that has its branches cut out annually after they have fruited. The imported ‘Samyl’ and ‘Samdy’ varieties have the most desirable growth habit and have full clusters of large-sized fruit.

Honeyberry (*Lonicera caerulea*). Related to the honeysuckle, this fruit is very soft and mild-flavored. The berries are very beautiful, and could have uses in the culinary arts (Figure 10). Berries could be packed in half-pint baskets and sold fresh. Even though they are soft, their shelf life can easily be a couple of weeks. Shrubs only grow to about two to three feet high and could be grown as a hedgerow.

Ribes (*Ribes spp*). Gooseberries and currants can be included in this group. Gooseberries are the easiest fruit to sell in this group since very few are produced. One can sell culinary or dessert varieties that are suited for cooking or eating fresh. Plants should be trained as vertical cordons to help avoid thorns interfering with

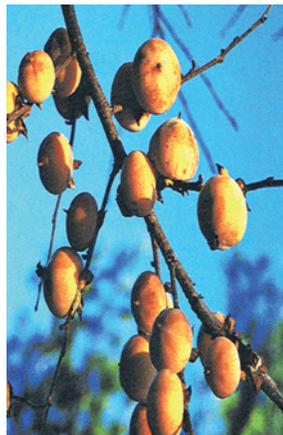


Figure 1. Persimmons are productive and pest-free.



Figure 2a. Paw paw tree.

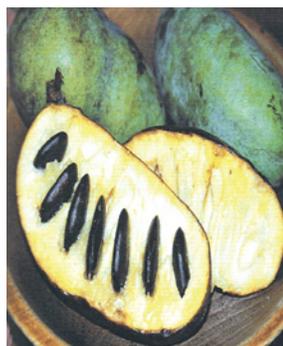


Figure 2b. Paw paw fruit is very seedy, but fragrant and sweet.



Figure 3. Cultivated mulberries are large, delicate, and have subtle sweet flavors.



Figure 4. Cornelian cherries are oval to pear-shaped.



Figure 5. When soft and ripe, Medlars have a flavor like apple sauce.

pruning and harvest. Thornless varieties are also available. ‘Pixwell’ is a variety that has been commonly sold in the US because it is disease resistant and easy to propagate. However, most gooseberry enthusiasts recommend choosing other varieties since the size and flavor of ‘Pixwell’ is so inferior. Mildew, leaf spot, and imported currant worm are

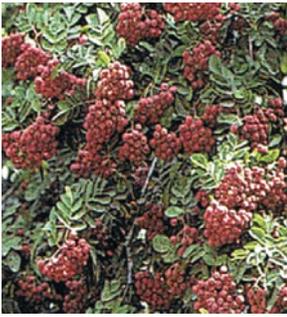


Figure 6. Mountain Ash.



Figure 7. Shipova.



Figure 15. Hardy Kiwi.



Figure 16. Lingonberry.



Figure 8. Aronia.



Figure 9. Elderberry.



Figure 10. Honeyberry.



Figure 11. Red Currant.



Figure 12. White Currant.

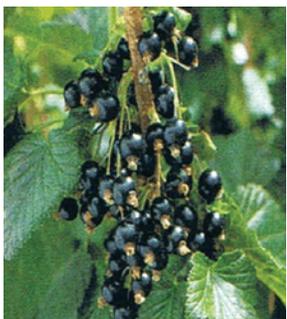


Figure 13. Black Currant.



Figure 14. Sea Buckthorn.

the biggest challenges to growing gooseberries in the northeast.

Of the red currants, 'Rovada' is the most commonly available and superior red fruiting variety. 'Pink Champagne' is the common pink variety (Figure 11). White currants are also available (Figure 12). It is among the sweetest red currants, and can be eaten out of hand. Its drawback

is that the strigs are often not filled with fruit due to drop, and the incomplete strigs make picking tedious, and detract from the pack. Currant cane blight is a fungus disease that has been a problem in the past, and has appeared as a problem again in the Northeast for all red, pink, and white currants.

Finally, black currants have promise as a machine-harvested fruit (Figure 13). Also, a couple of varieties are being considered for fresh fruit production because of their large size and sweet flavor. White pine blister rust and mildew-immune varieties should be selected. The processed market for this fruit has much promise, and the crop is well worth considering.

Sea Buckthorn (*Hippophae rhamnoides*). Tall-growing shrubs with ferny leaves are showy in the garden. The orange berries are touted for health benefits and must be cooked for use except with a few varieties ((Figure 14). Hand labor is needed to harvest this fruit. Harvest is completed by cutting half of the twiggy branches on the bush, freezing the branches, and then shaking off the fruit. No effective machine harvesting techniques have been developed for this fruit, so its promise for commercial development in the US is limited.

Vines

Kiwi (*Actinidia spp*). The fruits of hardy kiwi are smooth-skinned with superb flavor (Figure 15). They taste sweeter and are more fragrant than the commonly grown 'Hayward' variety from the west coast. Fruits come in a variety of shapes and colors. Vines must be trellised and kept in control, but not pruned too severely. Plants are slow to fruit, taking four to six years to produce fruit. Fruit is best packed in baskets.



Figure 17. Alpine Strawberry.

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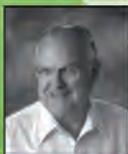
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Akebia (Akebia spp). Two varieties are needed for pollination. Fruits are similar in shape to a starfish. The flesh is sweet but bland and without much flavor. The purple to pink color and shape of fruit make it a curiosity item for farmer's markets.

Ground Cover

Lingonberry (Vaccinium vitis-idaea). The plants need acid, organic soil like blueberry (Figure 16). They are sensitive to over-fertilization and like some shade. Plants can be a challenge to establish, and are susceptible to Phytophthora root rot. Berries are smaller than cranberry, a challenge to harvest, but very much in demand fresh or frozen.

Alpine Strawberry (Fragaria vesca). A cousin of the wild strawberry. These fragrant fruits have plants that are started from seeds. They like organic, slightly acid soils. The fruit size is very small (Figure 17). Plants can be a challenge to find, and are very expensive. Fruits are small and a challenge to harvest.

Other uncommon fruits not reviewed here could also have potential for commercialization and are worth experimenting with. More emphasis is being placed on specialty crops as alternatives, and funding is available at the state and national levels for their development. Labor, energy, and other costs of production and marketing will impact the feasibility of growing these crops and determine which ones will eventually be developed. Health benefits, special flavors and colors, and ethnic demand will help them find potential markets.

Steve McKay is an extension educator for five counties in the Hudson Valley, and is located at the Cornell Cooperative Extension office in Columbia County, Hudson, NY. He specializes in berry crops and grapes.