



Redwood Barn Nursery

1607 Fifth Street Davis, California

“That’s as American as apple pie.”

Well, apple pie as we know it came from England, and apples are not native to North America. They originated in Asia and were domesticated all over Europe and brought to America. Many varieties were developed from their seedlings here. So the apple itself is not American in origin, but many varieties are.

Some crabapples are North American natives, while the other species in the genus *Malus* are from the mountains of Kazakhstan.¹ Most crabapples are only marginally edible. But the term isn’t precisely defined. The working definition of a “crabapple” was pretty much any small-fruited type (less than 2 inches in diameter). One variety called Transcendent has good size, texture, and flavor, even suitable for fresh eating. Mine grows and produces quite well, although the tree is susceptible to fireblight. But most crabapples we grow are ornamental trees grown for the flowers, and the fruit is either a nice bonus or a nuisance, depending on your viewpoint.

The domestic apple is a complex hybrid of species from Europe and Asia. Hybridization occurred naturally and intentionally in those areas, and that’s pretty much the story of apples once they came to North America as well: lots of chance seedlings, followed by careful breeding programs in the 20th century.

Johnny Appleseed, a real person who became a legend, was not spreading carefully selected sweet apple varieties. Early apples were mainly used for cider, particularly fermented into hard cider. Apple juice makes a drink that’s about 5 to 6% alcohol in about 7 to 8 weeks. Hm. Harvest in early fall, juice, ferment – seems that hard cider would be a truly American beverage for your holiday table. He was actually an itinerant nurseryman with a unique, though rather unprofitable, business model. Using seed from cider mills, he planted seedlings, fenced them in and then checked on them from time to time, making deals with local landowners to sell the trees for him.

Certain varieties figure heavily in apple breeding. According to researchers, those of American or Canadian origin “tended to associate in clusters with Delicious, McIntosh and Jonathan and Golden Delicious,” whereas the important progenitor of many UK varieties is Cox’s Orange Pippin. Genetic analysis largely fails to separate “cider” from “dessert” apples: “we would note that the use of apples for cider and dessert has been historically intermixed, at least to some extent.”

Today’s apples come to us from “modern (formal) breeding, and informal breeding (for example, amateur breeding and the breeding efforts of gardeners in the 19th century), [and]

¹ https://www.bbg.org/gardening/article/marvelous_malus



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old seedling cultivars....”² More recently, genetically modified apples have been developed with delayed browning after cutting. The Arctic series, approved for commercial production in 2015, includes three varieties expected to come to market this year.

New marketing includes patented as well as trademarked, branded apples. In some cases you can buy the trees and grow your own. With others, such as the Jazz apple, budwood is controlled and propagation isn't allowed unless you're licensed.

Since orchards were mandatory in early Virginia (great idea!), and apples are well-adapted to our eastern climate, trees from imported budwood got established and fruited well. But most new trees were grown from the seeds of those parents. Seedling apples are highly variable and hybridize very readily, creating new forms of often dubious quality.

But sometimes outstanding ones sprouted and were propagated vegetatively and named. By mid-19th century we had thousands of varieties. Most are long lost, but some heirloom apple varieties are obtainable from specialty growers. Many require more winter chilling than we get, and thus won't flower or fruit here. I have a Newtown pippin apple that has grown quite well for three decades but never fruits.

Apples for pie

Experts tell us to use a balance of tart and sweet apples, with firm texture that holds up in cooking.

Seedling selections

To my mother, baking apples were green. She used Newtown Pippin, just called green pippin, though I count 52 different common names for this old variety. Pippin means seedling. This chance seedling from the 1700's came from an estate in Long Island, New York. Tart and firm, it ripens in October on the East coast and stores well. In fact, it improves with a few weeks of storage, ideal for a holiday apple pie.

Newtown Pippin was common when I was a kid, but has fallen out of favor. For crisp, tart green apples, people now prefer Granny Smith, a hybrid seedling of a crabapple which came to us from Australia in the 1860s. But with less dense flesh, it wouldn't be my first choice for a pie.

Red Delicious, the ubiquitous generic red variety that everyone loves to hate, simply occurred as a sport (natural mutation) on rootstock in Iowa in the late 1800's. Rootstock then was likely seedlings from cider mills, so Red Delicious is really a classic American "seedling cultivar." The very tough skin allowed for long-term storage and better shipping. It's not a pie apple, but an important variety for commercial and breeding purposes and still one of the top-selling varieties.

Intentional hybrids: modern hybrids worth considering for pies.

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135360/>



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One offspring of Red Delicious is Fuji, which originated in Japan in the 1930's as an intentional cross between Red Delicious and another variety. Fuji is now one of the most popular apples in the world, by far the top seller in Japan and China and ranked third in the U.S. Sweet, with good density to the flesh that's "slightly sub-acid" which means less tart. Good for baking but needs balance from a stronger flavored variety.

Fuji is also a very adaptable tree, and fruits with less winter chilling than many others. It is very productive in this area.

Cripps Pink, sold under the trademark name of Pink Lady, is a modern hybrid from Australia with good balance of sweet and tart and firm texture that holds up in cooking. It only requires 300 to 400 chilling hours, and we average around 800. So, you could consider it for your garden.

Honeycrisp, a relative newcomer introduced by the University of Minnesota in 1991, was bred for fresh eating and has become very popular. During the life of its patent, Honeycrisp made millions of dollars for the university and its originators. It has that balance of sweet, tart, and firm. We just barely get enough winter chilling for Honeycrisp here, so in some years production will likely be limited.

Apple problems

Apple trees grow here. Unfortunately, codling moths infest the fruit with worms and are difficult to control. Multiple sprays during spring and early summer are necessary. Cleaning up the fallen fruit during the growing season is helpful. Bagging fruit early in the season is a simple method for ensuring that at least some fruit will be worm-free.

Fireblight is a native American bacterial disease that infected hawthorn, serviceberry, and mountain ash, and happily moved onto apple and pear trees as soon as they were introduced, identified and reported as early as 1780 in New York. It causes rapid dieback of shoots and kills flowers. It also attacks pears, quince, and related plants such as pyracantha.

Spraying with copper just before the flower buds open may provide some control. Home gardeners can prune out infected shoots when they occur, or take the time to remove dead parts later in the summer after infection has finished. The window of infection is narrow, about 50 to 85 degrees concurrently with rainfall, so it usually attacks during just a few weeks in spring. Healthy, vigorous trees will outgrow it.

So, what is a quintessential American dessert?

Anything made from berries: commercial strawberries, blueberries, and cranberries are American. The pedigree of blackberries is more cosmopolitan, but American species are important in the parentage of most varieties we grow.

Your strawberry-rhubarb pie is half American. Commercial strawberries originated from hybrids of American species in the genus *Fragaria*. The rhubarb came from Asia through Western Europe, especially England, where a major industry developed decades ago growing rhubarb in special houses called forcing sheds. Growers would transplant clumps from the field into special



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dark sheds and provide heat to get them to sprout in winter, then sell the stems at high prices in London and Paris for the holidays. Leaves that emerge in darkness are etiolated (lacking chlorophyll), and it makes the stems (the part we eat) tender, redder, and sweeter. Strawberries are very easy to grow. Rhubarb needs good drainage but is otherwise not fussy.

Blackberries grow all over the world and hybridize quite freely. We have a native species that is an important parent of the loganberry, marionberry, and boysenberry, three outstanding blackberries for this area. Raspberries don't like our Valley heat, but hybrids between raspberry and blackberry are more tolerant. Tayberry is a good example, with fruit that resembles a true raspberry.

Blackberries are easy to grow here, to put it mildly. The biggest issue is containing them, so they don't run and root all over your yard. I recommend Marion and Triple Crown varieties for large, juicy, sweet berries. Logan, Olallie and Boysen berries are great tart-sweet types, and the Tayberry is your best raspberry equivalent.

Gardeners are doing well with blueberries in Davis since the city switched from wells to river water. Our water is still alkaline but has less dissolved salts. We still add soil sulfur to reduce the pH as blueberries prefer acidic soils. They really benefit from lots of mulch, a steady supply of moisture, and an organic source of nitrogen. Blueberries are never drought tolerant. Mine need water about twice a week. They can grow in full sun or light shade.

Plant the Southern highbush types, which grow in a wide range of climate conditions and will set even with low winter chilling. A few varieties of Northern highbush are also adaptable. Blueberries are easy to manage in large containers. Plant two types for cross pollination.

Pumpkins and pecans are also native to Mexico and the southern United States, and both can be grown here. "American as pecan pie" would be a better saying.



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Modern hybrid that is tart and sweet, with firm flesh that holds up in cooking, In a unique marketing strategy, Pink Lady is the trademark name of selected fruit of Cripps Pink apple from Australia. They are sold under both names, depending on the color intensity of the skin and the sugar to acid balance.



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Jazz apple is a modern hybrid, introduced from New Zealand in 1985. The name is trademarked and the trees are licensed to growers, not available to home gardeners. Low acid but very firm flesh, perhaps good to blend in baking with more tart varieties.



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Apple blossoms in early spring. Pink buds open to white blossoms with a blush of pink on the petals.



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Fireblight, a bacterial disease, attacks the blossoms and tender shoots of apples in spring. It also infects pears, quince, and other related species. It's difficult to prevent, but can simply be pruned out as it occurs or later in the summer. Healthy, vigorous trees will outgrow it.



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A crabapple grown for fruit. The Transcendent variety has sweet, tart fruit larger than most ornamental types. It can be used for jam, spiced apple recipes, or just eaten fresh off the tree.



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Blossoms of the Transcendent crabapple tree in spring. The tree is covered with prolific pink buds that open white, followed by tasty fruit for harvest in mid-summer.



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We recommend the Southern highbush blueberries for this area. This one is called Sharpblue. Blueberries need some special attention at the time of planting: soil Sulphur to reduce the pH, rich soil, and plenty of water. They grow well in large containers.



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A classic native American tree, the pecan begins to split hulls to drop the nuts in early November. Harvest continues into December. The trees are not fussy but get quite large, need careful training for good branch structure, and are prone to aphids in summer.