THE UNIVERSITY OF ARIZONA
Cooperative Extension

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RECOMMENDED FRUIT VARIETIES FOR THE CENTRAL ARIZONA HIGHLANDS

Apples

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Introduction

The apple tree (Malus domestica) is an extremely adaptable plant that can thrive in a myriad of sites throughout the temperate regions of the world. Originating in the mountains of Kazakhstan, its domestication dates back thousands of years and has since spread throughout the world. Brought to the Americas in the 17th century by European colonists, the apple has been a mainstay of American culture and its impact on Arizona is no different. Today, thousands of apple cultivars exist and many of them are available for sale in nurseries throughout the United States. With so many choices, it can be a challenge to know which varieties are appropriate for any given region, let alone site. This publication aims to serve as a guide for people living in the Arizona Central Highlands (the transitional zone that acts as a demarcation between the Basin and Range of southern Arizona and the Colorado Plateau of Northern), drawing on real world experience and recommendations of growers living there.

While specifics were often limited to available data for each cultivar, information is conveyed using the following seven categories, which are intended to help (primarily backyard) growers select the proper apple variety:

Historical Context: parentage, origin, and year of introduction to the public

Fruit Characteristics: often including appearance of skin and flesh, texture and flavor

Uses: such as fresh-eating, culinary, cider-making, and refrigerated storage capabilities

Fruitfulness: precocity (time to fruit production from juvenile to mature), crop size, propensity to alternate bear (produce a large crop one year, and a significantly smaller one in the next), and pollenizer requirements (it is almost always beneficial to have a second tree, even if the variety is self-fruitful

Phenology: key developmental timings such as bloom, ripening, and harvest. These are moderated by site (warmer sites will speed up ripening) and crop load (higher crop loads will slow ripening).

General Tree Characteristics: size, architecture, and disease resistance. Most trees bear fruit on shortened shoots called spurs; if partially or completely tip-bearing (sets fruit at the ends of last year's shoots), it will be noted

Site Selection: USDA Hardiness Zone, general temperature preferences and "chill hours"

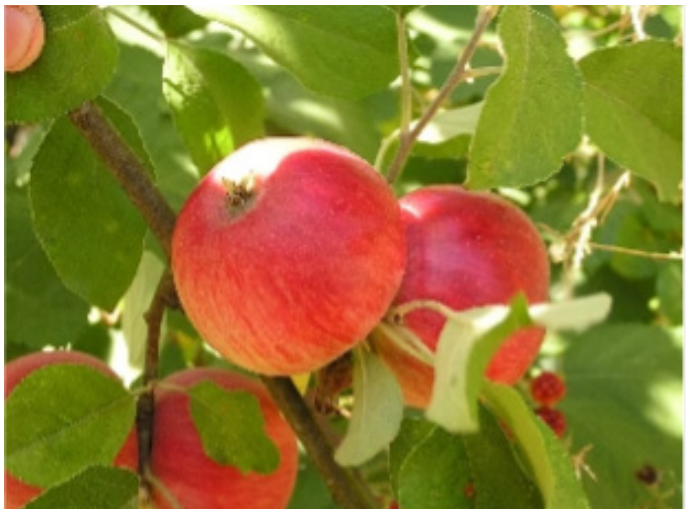
The USDA Plant Hardiness Zone map (https://planthardiness.ars.usda.gov/) (updated in 2023) was created as a way of conveying the average minimum annual temperatures to growers and gardeners of perennial plants such as fruit trees and landscape plants. The concept of "chill hours" is used to describe the number of hours between 32- and 45-degrees Fahrenheit that a perennial plant must experience during the dormant season in order to ensure uniform budbreak and bloom. Varieties that have relatively low chill hour requirements planted in colder climates will start breaking bud too early and are likely to lose blossoms due to frost or endure regular, destructive, cold events that could eventually kill the tree. A disclaimer should be noted: these values are generally considered 'ballpark,' but they are useful in deciding whether a particular variety is a good choice for a specific site.

This publication focuses on scion varieties—the fruit-bearing upper parts of trees that are grafted onto rootstocks. Although rootstock selection is not a primary focus here, nurseries consulted strongly recommended, and most likely sold, MM-111. This semi-dwarfing rootstock confers several desirable traits, including moderate size control (trees typically reach 16–20 feet), precocity (earlier fruiting), tolerance to alkaline soils, and resistance to woolly apple aphid.

In all, 37 varieties were selected from a larger pool that was recommended by local experts, filtered for inclusion based on their availability to consumers.

A great deal of thanks is given to Sandra Lockwood,

Akane/ Tokyo Rose



Akane fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A cross between Jonathon and Worcester Pearmain, bred at Morioka Experiment Station, Japan in 1937.

Fruit characteristics: Small to medium-sized fruit with solid, bright, red-colored skin with white flesh that delivers good balance between sugar and acid.

Uses: Primarily known as an eating apple but can also be used for juicing. Fairly poor storage potential (~50 days).

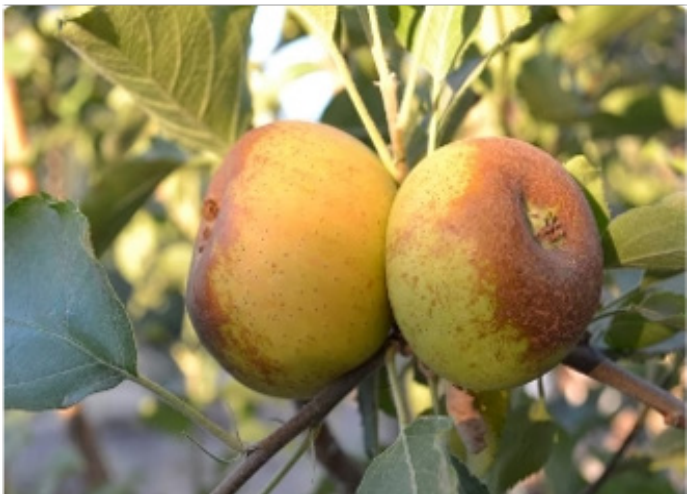
Fruitfulness: Precocious and not particularly susceptible to alternate bearing, but crop thinning is crucial to achieving good- sized fruit. Requires pollinator with similar bloom period.

Phenology: Early to midseason bloom and harvest (125-145 days from bloom to ripening).

Tree Characteristics: Small, cold hardy tree of medium vigor.

Site selection: Zones 4-9. Estimated chill hours required range from 600 to 800. Performs well in warm climates. Early bloom necessitates planting on slopes in areas where late spring frosts can occur.

Ashmead's Kernel



Ashmead's Kernal fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: An Antique/heirloom variety originally planted circa 1700 by Dr Thomas Ashmead in Gloucester, England.

Fruit Characteristics: Small to medium-sized fruit. Greenish to golden brown russet skin with reddish highlights. Creamy yellow flesh is aromatic, crisp and sweet.

Uses: Used for dessert, cider and sauce. Keeps 3-4 months.

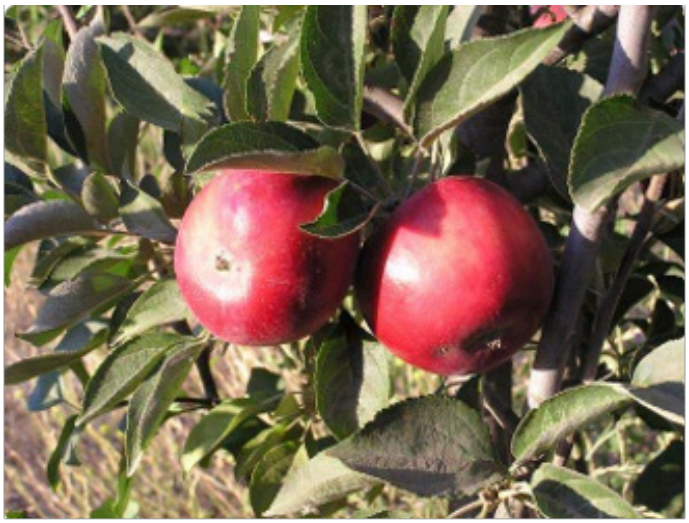
Fruitfulness: Naturally precocious and known as a moderate cropping variety with a potential to alternate bear. Requires a pollenizer of a different variety with similar bloom period.

Phenology: Mid-to-late blooming and late-ripening variety (after Red Delicious and about even with Golden Delicious). Fruit picked early is somewhat sharp and acidic but it mellows after a few weeks off the tree.

Tree Characteristics: Resistant to powdery mildew, somewhat resistant to apple scab. Winter-hardy tree.

Site Selection: Zones 5-9. 800-1,000 chill hours.

Arkansas Black



Arkansas Black fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Antique/heirloom variety created by the first commercial nursery in Arkansas in 1886.

Fruit characteristics: Large, dark red to purple skins, yellow flesh. Early-harvest fruits are known to be hard and sour, with tannins compared to cabernet sauvignon. Later harvests and even long-term storage improve flavor.

Uses: Hard, crisp dessert apple, also used for pie and cider. Long shelf-life (throughout winter).

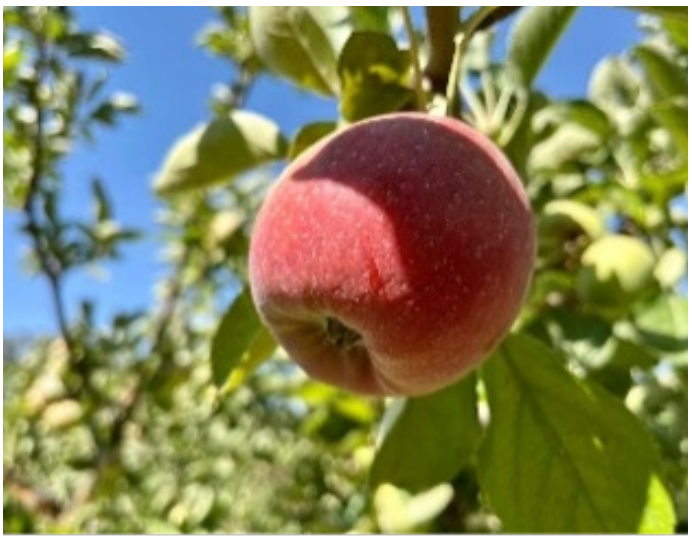
Fruitfulness: A pollenizer of similar bloom time, such as Grimes Golden or Newton Pippen is recommended.

Phenology: Mid to late bloomer leading to a late season harvest date.

Tree Characteristics: Spur-bearing and moderately vigorous. Resistant to cedar apple rust, with some resistance to scab and fire blight.

Site Selection: Zones 5-10. 500-600 chill hours. Excels in warmer locations.

Baldwin



Baldwin fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Antique/heirloom variety that was at one time the most popular apple in New England.

Fruit Characteristics: Medium to large apple with orange/red over yellow skin. Sweet, crisp, coarse, yellowish flesh.

Uses: Fresh-eating, cider, sauce and pie. Stores 3 to 6 months.

Fruitfulness: Prone to alternate bearing and should be pruned and thinned properly to avoid heavy cropping.

A pollenizer of similar bloom time such as Grimes Golden or Liberty is required as Baldwin pollen is sterile.

Phenology: Midseason bloom leading to a later harvest.

Tree Characteristics: Good disease resistance. A vigorous, cold hardy tree that shows resistance to cedar-apple rust, wooly apple aphid, and powdery mildew.

Site Selection: Suitable for zones 4-10 with full sun and well-drained soil. Low chill hour requirement.

Black Twig

Black Twig fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: An heirloom variety introduced in 1830 from Tennessee and rumored to be a favorite of President Andrew Jackson.

Fruit Characteristics: A medium to large apple with red striping over yellow/ green skin and tart and tannic yellow flesh.

Uses: Good keeper used for fresh eating and cider applications.

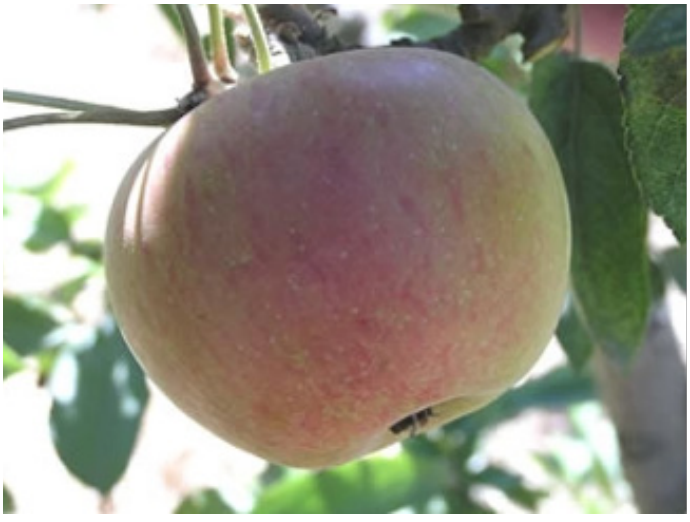
Fruitfulness: A pollenizer of similar bloom time is required.

Phenology: Late bloom and final ripeness.

Tree Characteristics: Good disease resistance to cedar-apple rust and fire blight, moderately vigorous.

Site Selection: Zones 5-10 with lower chill hours requirement of approximately 300.

Braeburn



Braeburn fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A seedling variety thought to be a cross between Granny Smith and Lady Hamilton and introduced from New Zealand in the 1950s.

Fruit Characteristics: Medium to large-sized fruit with red stripes on a green background. Cream-colored flesh is crisp and tangy, with a richer and more aromatic flavor than its parent, Granny Smith.

Uses: Best-suited for fresh eating, though good for culinary uses such as pie-baking. Decent keeper (130 days).

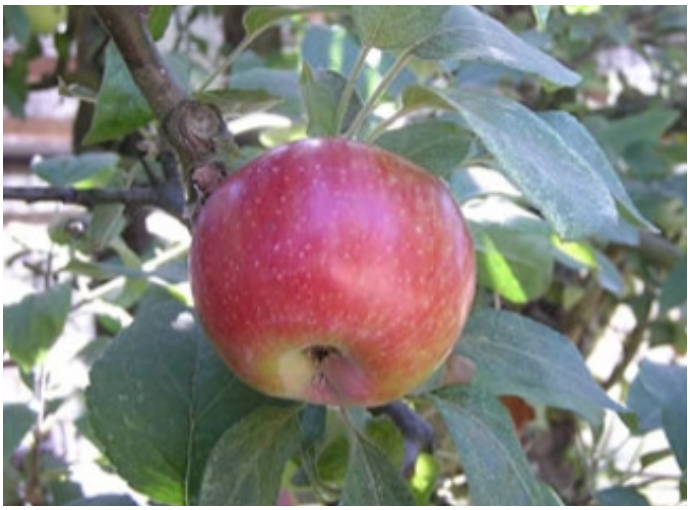
Fruitfulness: Can yield heavy crops and tends to alternate bear. Although self-fruitful, fruit set is improved by a pollenizer of similar bloom time.

Phenology: Mid to late bloom and ripening variety (150 to 170 days from bloom to harvest).

Tree Characteristics: Small to medium-sized, naturally precocious tree.

Site Selection: Zones 5-8. 700 chill hours.

Empire



Empire fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A seedling variety developed because of a cross between McIntosh and Red Delicious in 1945 at Cornell University.

Fruit Characteristics: Medium-sized, red-skinned fruit with a waxy bloom. Sweet and juicy flesh with sprightly flavor and subtle aromatics.

Uses: Fresh eating and saucing, good keeper (stores for 140 days).

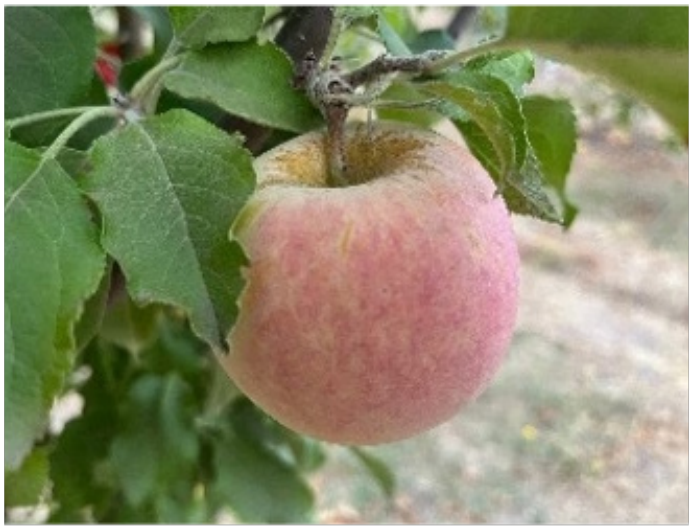
Fruitfulness: Good-producing, consistently heavy-bearing tree. Somewhat self-fruitful and a good pollinator for other apples, especially Mutsu, Gravenstein, Winesap, and Jonagold. A pollenizer of similar bloom time, such as Braeburn, is recommended.

Phenology: Early bloomer, leading to a mid-to-late harvested apple, depending on fruit load.

Tree Characteristics: Cold hardy, medium-sized tree with resistance to fire blight and cedar apple rust.

Site Selection: Zones 4-9. 600 to 800 chill hours. Excels in hot summer climates.

Fuji



Fuji fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Developed in Japan in the 1960s and known as the "sweetest of all apples"! On a Brix Scale the apple can range from 15-18.

Fruit Characteristics: Medium-sized, rectangular fruit with dull, reddish orange over yellow/green skin which grows increasingly red with exposure to sunlight and cool temperatures. White, crunchy flesh boasts excellent flavor.

Uses: Fresh-eating apple that stores exceptionally well (180 days max.).

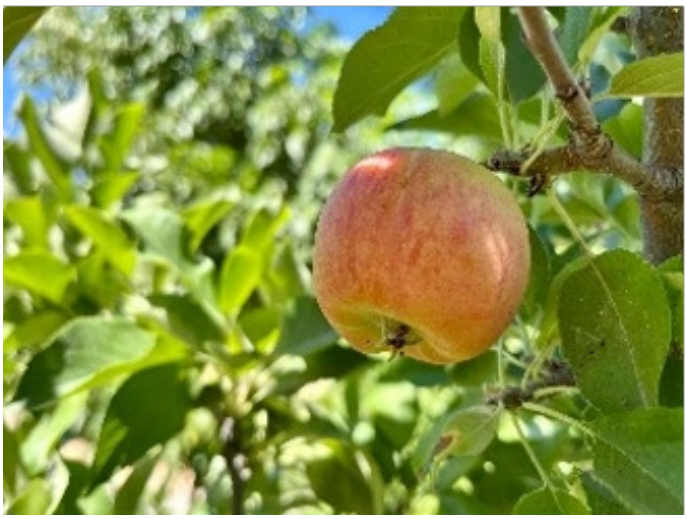
Fruitfulness: Excellent pollinator for other apple trees, though not a reliable self-pollinator. Due to this fact, a pollenizer of similar bloom time is recommended.

Phenology: Late bloom and ripening (140 to 160 days from bloom to harvest).

Tree Characteristics: Medium-sized tree, with a weeping growth habit. Extremely susceptible to fire blight but shows some resistance to cedar apple rust. Partially tip-bearing.

Site Selection: Zones 6-10. Low chill hours (less than 500). Performs best between 3000- and 4300-foot elevation, with ripening benefiting from warm fall weather.

Gala



Gala fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Parentage is Golden delicious crossed with Pippen from New Zealand in 1965.

Fruit Characteristics: Conical-shaped, fruit varies in size with skin that is reddish orange over yellow. Crisp and tart with subtle aromatics.

Uses: Best suited to fresh eating. Keeps well (180 days max. storage).

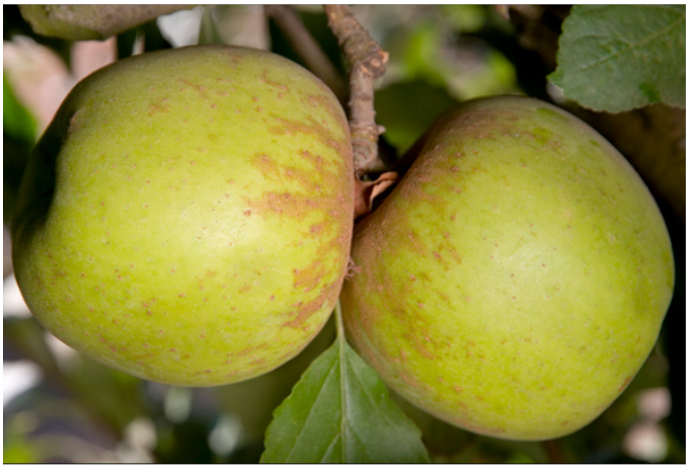
Fruitfulness: A naturally precocious bearer and good producer that is moderately susceptible to alternate bearing. Self-fruitful but will not cross-pollenate with Golden Delicious. A pollenizer of similar bloom time is recommended.

Phenology: Midseason bloom and ripening leading to an early harvest, depending on site.

Tree Characteristics: Large, upright tree.

Site Selection: Zones 4-10. Low chill hours (less than 500). Adapted to cold and warm climates though believed to perform best between 3500- and 4300-foot elevation (warmer sites) in Arizona.

Garden Delicious



Garden Delicious fruit. Photo credit to Dave Wilson Nursery.

Historical context: Purportedly a sport (mutation) of Red Delicious that was discovered later in the 20th century.

Fruit Characteristics: A green/yellow apple that may blush to red. Flavor superb, both sweet and crisp. The skin is greenish yellow with red blush to full red, depending on environmental factors such as temperature and light exposure.

Uses: Good shelf life. Often used for cooking and desserts.

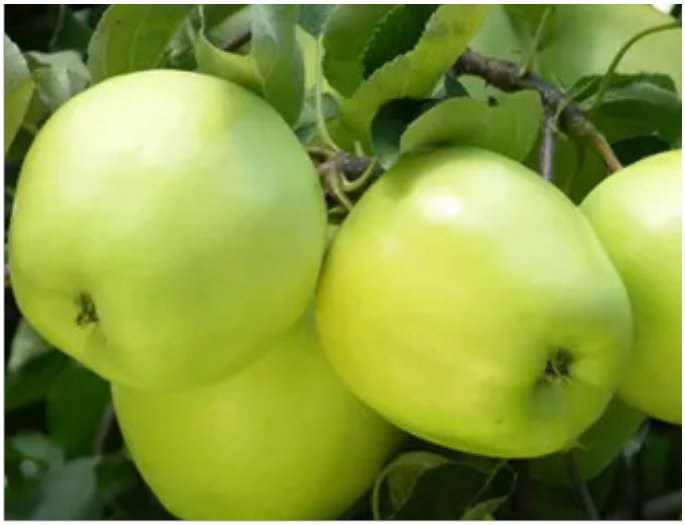
Fruitfulness: Self-fruitful, though a pollenizer of similar bloom time is recommended.

Phenology: Late bloom leads to early-to-midseason harvests.

Tree Characteristics: Moderately vigorous genetic dwarf (6 to 8 ft in height). Resistant to scab.

Site Selection: Zones 4-8. 600 chill hours.

Ginger Gold



Ginger Gold fruit. Image courtesy of Stark Bros.

Historical context: Developed from Golden Delicious and Albermarle Pippin in Virginia in the 1960s and named after the orchard owner, Frances "Ginger" Harvey.

Fruit Characteristics: Medium to large, round/conical fruit with yellow/greenish skin that delivers tart, crispy, juicy flesh which resists browning.

Uses: Fresh eating.

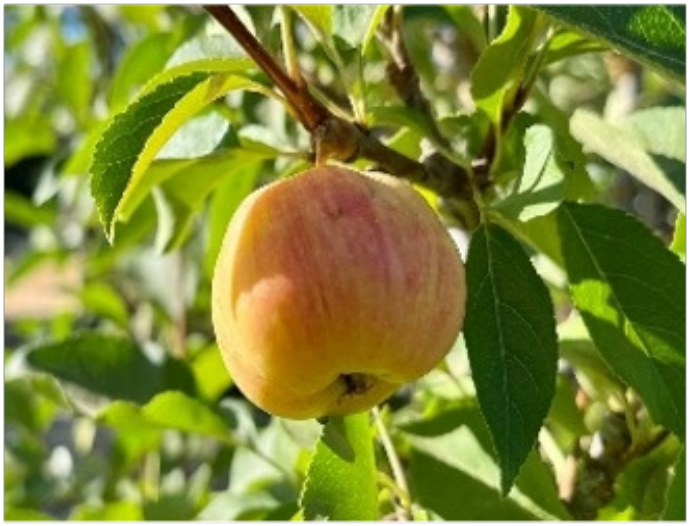
Fruitfulness: A pollenizer of similar bloom time, such as Red Delicious or Honeycrisp, is recommended.

Phenology: Extremely early ripening.

Tree Characteristics: Moderate vigor and described as a semi-dwarf cultivar, reaching 12 to 15 feet in height. Partial tip-bearer.

Site Selection: Zones 4-9. 600 chill hours. Tolerant to hot climates.

Gold Nugget



Gold Nugget fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Heirloom variety developed at the Kentville Agricultural Experiment Station, Nova Scotia in 1943 and whose parents are Golden Russet and Cox's Orange Pippen.

Fruit Characteristics: Small, yellow apples striped with red/orange. Known for exceptional flavor.

Uses: All-purpose, touted for pie incorporation. Capable of being stored for up to 2 months.

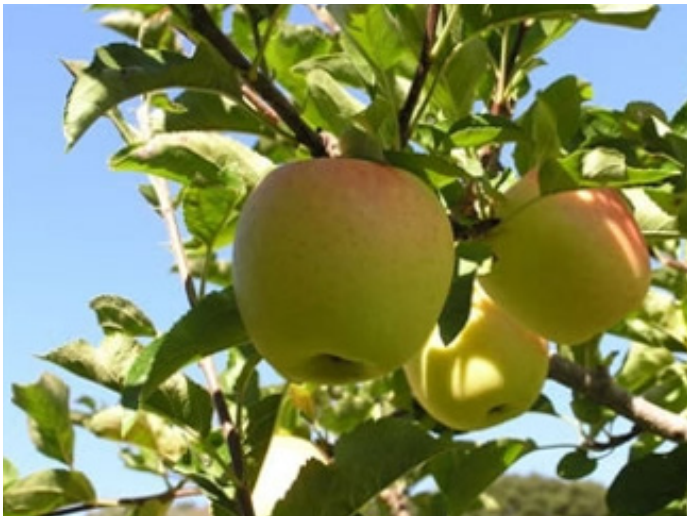
Fruitfulness: Self-sterile; a pollenizer of similar bloom time is recommended.

Phenology: Midseason bloom leads to late harvest.

Tree Characteristics: AA spur-bearing tree that can be somewhat vigorous, potentially leading to thin branches if not pruned properly. Resistant to scab, mildew, and canker.

Site Selection: Zones 5-10.

Golden Delicious



Golden Delicious fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Longtime favorite for its sweetness and flavor, the Golden Delicious was developed in West Virginia in 1890. Parent believed to be Grimes Golden.

Fruit Characteristics: Medium to large, conical-shaped apple with russet dots, golden skin, and fine-textured, yellow flesh. Sweet and juicy, with a mild, yet distinguished flavor.

Uses: Multi-purpose apple preferred for fresh eating but can also be stored (160 days max.) or processed. Susceptible to "bitter pit" and bruising.

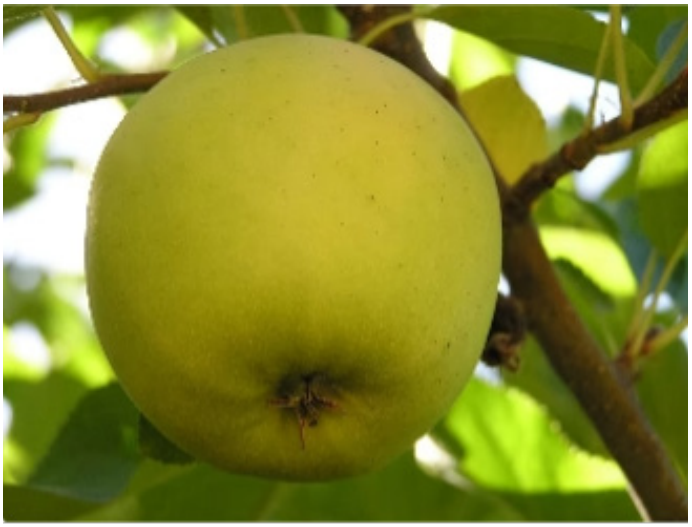
Fruitfulness: Great production without particular proclivity to alternate bear. Heavy crops can be picked throughout the harvest season. Valued as a pollenizer due to long bloom period. Self-fruitful, though pollination can be variable; a pollenizer of similar bloom time is recommended.

Phenology: Blooms over a long period of time throughout midseason, leading to mid-to-late season ripening (145-165 days after bloom).

Tree Characteristics: Medium-sized tree with natural precocity. Susceptible to bitter pit disorder. Partial tip-bearer.

Site Selection: Zones 4-10. 700 chill hours.

Goldrush



Goldrush fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Produced in Indiana in 1973 from multiple parents, including Golden Delicious, Rome Beauty, and Winesap.

Fruit Characteristics: Medium-sized apple with golden skin and orange/red blush. Flesh has a firm texture and a crisp, spicy flavor.

Uses: Multi-purpose variety used for fresh eating, cider, and even salad. Stores extremely well.

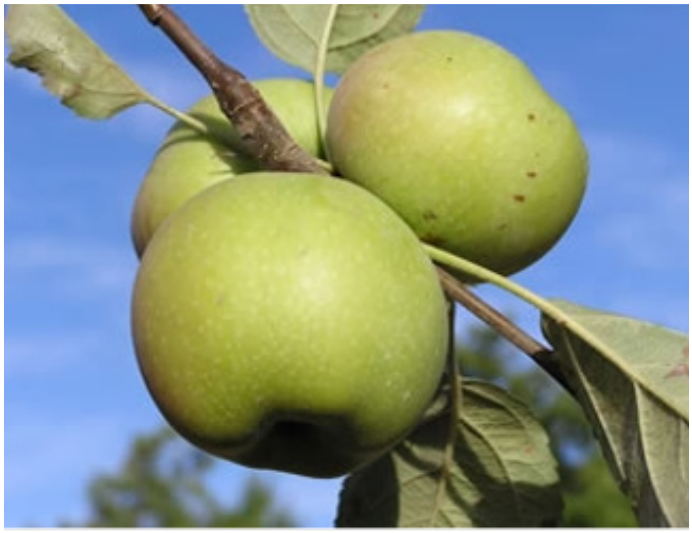
Fruitfulness: A pollenizer of similar bloom time is recommended.

Phenology: Midseason bloom leading to a late ripening.

Tree Characteristics: Highly resistant to apple scab.

Site Selection: Zones 4-10.

Granny Smith



Granny Smith fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: An heirloom variety developed from seed in Australia in 1868 by an elderly Maria Ann Smith a few years before her death. The scion wood cared for by "granny Smith" would carry on Ms. Smith's legacy.

Fruit Characteristics: Medium to large, green, apple with bright green to yellow skin surrounding crisp, tart, flesh of moderate sweetness.

Uses: Used for fresh eating but esteemed for its culinary uses as it holds up extremely well, especially to baking in pies. Excellent keeper, sweetening with storage.

Fruitfulness: Good pollenizer for other apples due to long bloom period. Good producer as it is self-fruitful but benefits from an additional pollenizer.

Phenology: Mid-bloomer harvested late season.

Tree Characteristics: A moderately vigorous, large, upright, and spreading tree. Susceptible to scab and fire blight.

Site Selection: Zones 6-10. 400 chill hours. Requires long summer and/or hot climates due to high acid.

Gravenstein

Gravenstein fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A seedling variety initiated in 17th century Denmark and brought to North America via California in 1811.

Fruit Characteristics: Medium to large fruit with red stripes over greenish-yellow skin; flesh is crisp, juicy, and fine-textured.

Uses: A quality dessert apple that develops complex aromatic flavors when fully ripened. Multi-purpose apple that can be used for eating, saucing or pie, though they do not store (90 days max.) or ship well.

Fruitfulness: Moderately productive, but will alternate bear unless thinned in heavy years, which coupled with over-cropping can lead to "June-drop"/ self-thinning. Requires a pollenizer as it is known to produce sterile pollen (Red Astrachan, Jonathon, Empire, Fuji, Gala, Red Delicious are recommended).

Phenology: Early to midseason bloom leading to an early harvest (110-130 days from bloom to harvest).

Tree Characteristics: An extremely vigorous tree that grows to a large size if not controlled by pruning. Partial tip bearer.

Site Selection: Zones 2-10. A cold hardy tree that performs best in cooler climate/ high elevation sites and may struggle in the hottest climates.

Grimes Golden

Grimes Golden fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Seedling variety reportedly discovered at the West Virginia cider mill of John Chapman (AKA "Johnny Appleseed) in 1804 and then subsequently introduced throughout the southwestern US in the 19th century. Believed to be a parent of Golden Delicious.

Fruit Characteristics: Medium-sized light green to bright yellow skin surrounds creamy-textured white flesh. The flavor is spicy and tangy with a honeyed sweetness.

Uses: Superior dessert apple due to complex flavor is also excellent for cider and sauce.

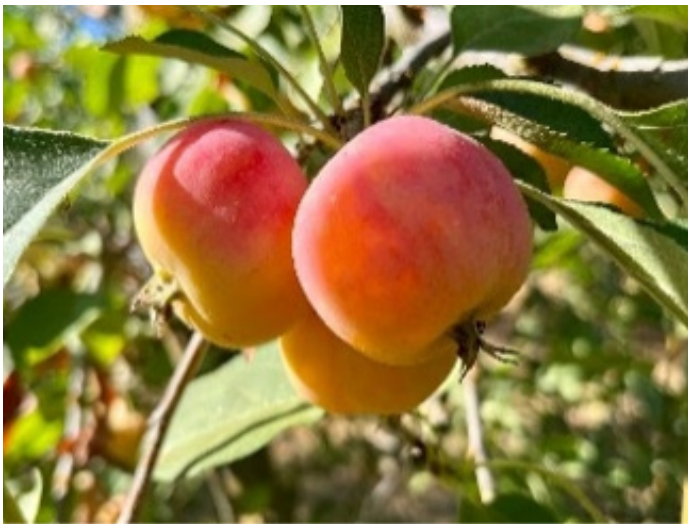
Fruitfulness: Excellent pollenizer due to long bloom period. Precocious and self-fertile, though a pollenizer of similar bloom time is recommended to enhance pollination.

Phenology: Late bloom leading to a late harvest period.

Tree Characteristics: Spur-bearing variety with resistance to cedar-apple rust and powdery mildew, though more susceptible to scab.

Site Selection: Zones 5-10. 400-600 chill hours. Performs best in warmer climates.

Hewes Virginia Crabapple



Hewes Virginia Crabapple fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A sweet crabapple whose use was first documented in early 18th century Virginia and claiming to have been the most common fruit variety grown in the area at that time.

Fruit Characteristics: Small fruit is covered with red/yellow skin, speckled with white over yellow flesh. Complex flavors highlighted by notes of apple, banana, pear, and butterscotch (especially when pressed for cider). Solid tannins and acid add complexity to cider batches.

Uses: Intended for cider-making, with the range to be enjoyed for fresh eating.

Fruitfulness: As a crabapple, it is considered a valuable pollenizer for other trees. For its own fruitfulness, it is recommended that a pollenizer of similar bloom time is planted as well.

Phenology: Midseason bloom and harvest.

Tree Characteristics: Small but vigorous and heavily-branched with strong wood that can support an ample crop. Some resistance to scab though susceptible to cedar-apple rust and fire blight.

Site Selection: Zones 3 to 8. Known to perform well in warm climates.

Honeycrisp

Honeycrisp fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A contemporary commercial favorite developed by the University of Minnesota in the late 20th century.

Fruit Characteristics: Medium to large apple with red striping over yellow skin. Flesh is crisp and juicy with pronounced aromatics. Prone to bitter pit.

Uses: Fresh-eating apple that stores well (up to 5 months).

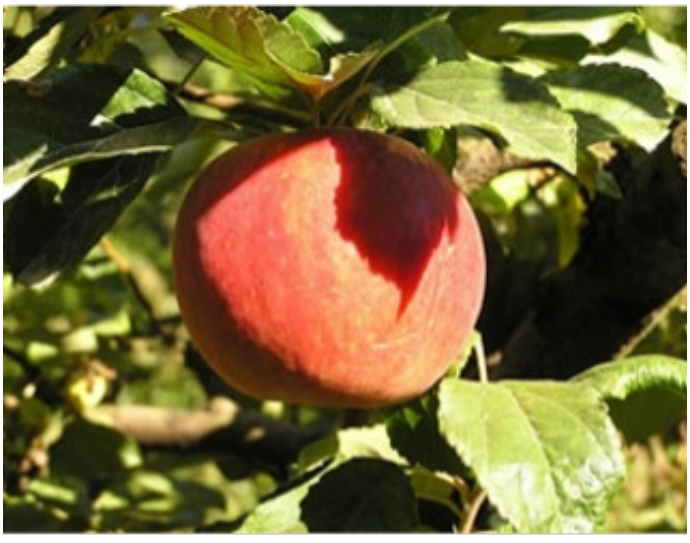
Fruitfulness: A pollenizer of similar bloom-time, such as Gala, Granny Smith, Empire, or McIntosh is recommended.

Phenology: Mid-to-late season bloom and harvest.

Tree Characteristics: A spreading tree of low to medium vigor. Very resistant to scab, though susceptible to mildew. Fire blight susceptibility depends on age, rootstock, and disease pressure.

Site Selection: Zones 3-10. 800-1000 chill hours. A winter hardy tree that can be a challenging apple to grow if climate (too warm), soil (low calcium, potassium, and nitrogen) and pH (too basic or acidic) are unfavorable.

Idared



Idared fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: An heirloom variety resulting from a cross between Jonathan and Wagener, released by the University of Idaho in 1942.

Fruit Characteristics: Medium to large fruit with bright red/blush skin coloring and sweet, tart white flesh.

Uses: Appropriate for fresh eating and cooking. Good keeper, whose flavor improves with storage (150 days max).

Fruitfulness: Good producer, not prone to alternate bearing. Not self-fruitful; needs a pollinizer of similar bloom time.

Phenology: Early bloom, with a medium to late ripening time, requiring 140 to 155 days from bloom to harvest.

Tree Characteristics: Medium-sized tree that is susceptible to fire blight and moderately susceptible to powdery mildew.

Site Selection: Zones 4-10 with good cold hardiness.

Jonagold

Jonagold fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Cross between Jonathan and Golden Delicious developed in New York in 1953.

Fruit Characteristics: A large fruit with thin, red-orange blush over yellow skin and slightly course white/cream-colored flesh. Crisp and juicy with distinct aromatics and subtle acid.

Uses: Primarily used for fresh eating but shows versatility in baking, salads, and sauces. Decent storage potential (1 to 2 months).

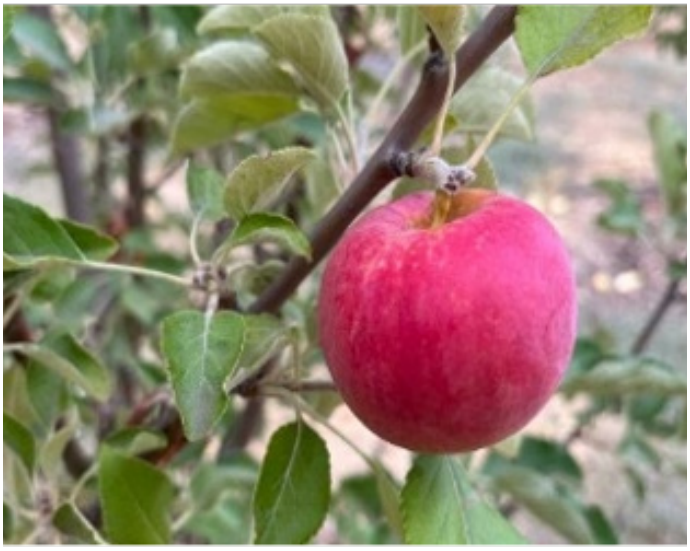
Fruitfulness: Good producer with low susceptibility to alternate bearing. Pollen is sterile and requires a pollenizer such as Fuji, Gala, Granny Smith, Liberty, or Red Delicious (though Golden Delicious is not recommended).

Phenology: Early to midseason bloom and mid-to-late ripening.

Tree Characteristics: Sturdy, spreading, medium-sized tree that is resistant to fire blight.

Site Selection: Zones: 5-10. 700-800 chill hours.

Jonathan



Jonathan fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Believed to be a seedling variety discovered in Woodstock, New York in the late 18th century, with Spitzenburg serving as one of the parents. Commonly introduced to the SW during the 19th century.

Fruit Characteristics: A small to medium-sized red apple that is crisp and juicy with subtle acidity and quality aromatics.

Uses: Multi-use apple that is suitable for saucing or juicing but prized for fresh-eating and pie-making. Maximum storage capability is about 120 days.

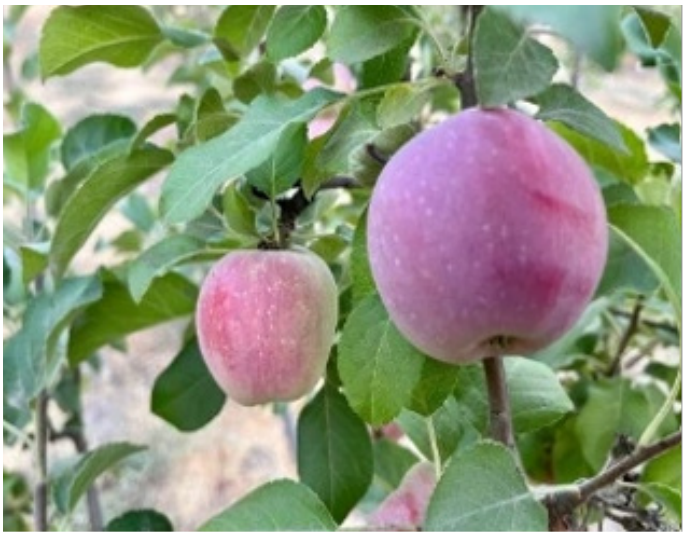
Fruitfulness: Heavy producer year to year and not particularly susceptible to alternate bearing. Somewhat self-fruitful, though pollenizers of similar bloom time improve fruit set.

Phenology: Midseason bloom and ripening (135-150 days from bloom to harvest).

Tree Characteristics: A naturally precocious small to medium-sized tree susceptible to powdery mildew, fire bight, and "Jonathon spot". Partial tip-bearing.

Site Selection: Zones 4-10. 700-800 chill hours. Best suited for higher elevation regions as fruit softens in extreme heat. Requires ample sun for complete reddening of skin, while cooler climates lead to a more striped appearance.

Liberty



Liberty fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A "McIntosh-type" apple developed by Cornell University in the mid-20th century.

Fruit Characteristics: Medium-sized apple, coloring often depends on site it is grown on, ranging from yellow background with red striping to solid red. White flesh is crisp and sweet with a rich, sprightly flavor.

Uses: Culinary, cider (sweet), or dessert; quality improving with hang time. Stores well for approximately 4 months.

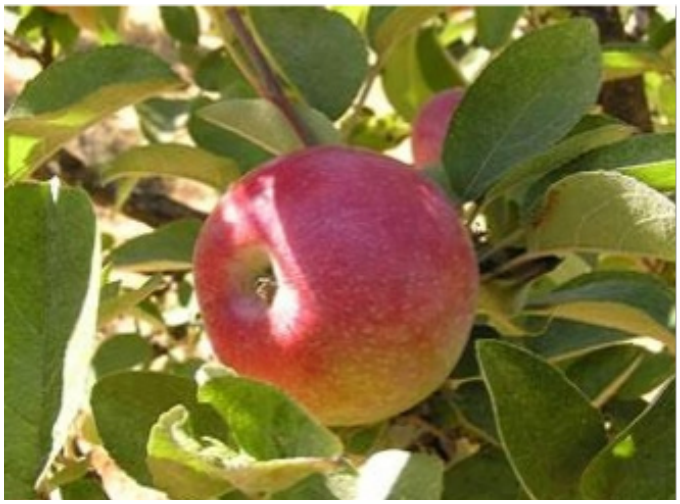
Fruitfulness: Very productive, requiring aggressive thinning to maximize fruit size. Self-fruitful as well as inter-fruitful with Red Delicious, Empire, McIntosh, though a pollenizer of similar bloom time is recommended.

Phenology: Early-to-midseason bloom leading to midseason ripening and an early-fall harvest.

Tree Characteristics: Low maintenance; disease resistance to scab, rust, fire blight, and mildew; cold hardy apple.

Site Selection: Zones 4-10. 800 chill hours.

McIntosh



McIntosh fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Named after Canadian John McIntosh, who discovered the original sapling in the early 19th century.

Fruit Characteristics: Medium-sized fruit, whose skin consists of bright to dark red coloring over a green background and white flesh. Crisp, sweet, spicy, and highly aromatic with subtle acid.

Uses: Fresh-eating and culinary. Can be used for cider, depending on the desired flavor profile. Stores for 130 days max.

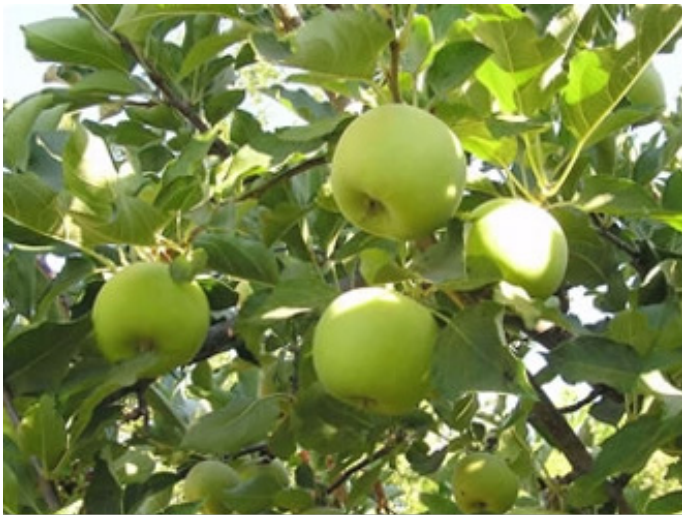
Fruitfulness: Naturally precocious and a good producer that is not particularly prone to alternate bearing but does experience a regular "June drop"/self-thinning. Self-fruitful, with pollination greatly improved by Red Delicious and Gala, among others.

Phenology: Early bloom and midseason harvest (125-145 days from bloom to harvest).

Tree Characteristics: A medium to large tree that is susceptible to powdery mildew, scab, cedar apple rust, and fire blight.

Site Selection: Zones 3-10. 900 chill hours. Recommended for higher elevation sites with superb quality in cool climates as fruit softens and acid falls in hot climates.

Mutsu



Mutsu fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Also known as Crispin, this variety was bred through Golden Delicious parentage in the Mutsu Province of Japan and introduced in 1948.

Fruit Characteristics: Very large greenish-yellow fruit with coarse yellow-white flesh that presents as crisp and spicy, with subtle aromatics.

Uses: Can be eaten fresh or used to cook (especially pies). Extremely good keeper (180 days max).

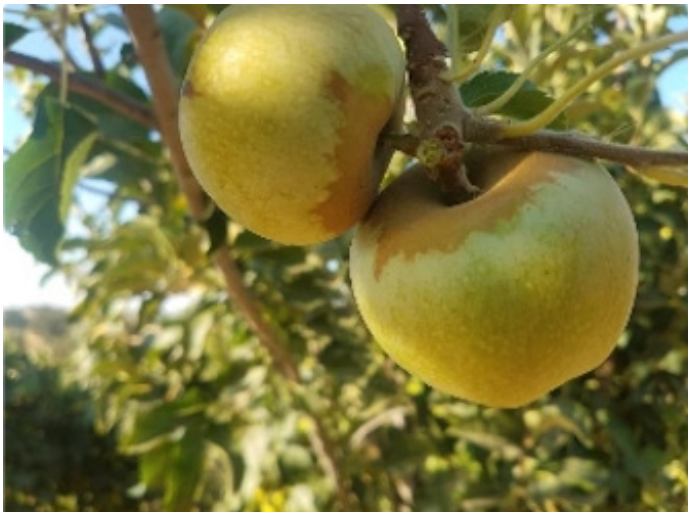
Fruitfulness: Not overly prone to alternate bearing. A pollenizer of similar bloom-time, such as Grimes Golden, Liberty, Red Delicious, Granny Smith, Fuji or Gala is recommended as Mutsu produces sterile pollen.

Phenology: Midseason bloomer, leading to a mid-to-late season ripening (145-165 days from bloom to harvest).

Tree Characteristics: Large, vigorous tree that is resistant to powdery mildew.

Site Selection: Zones 4-10. 500 chill hours. Performs well in spring and fall frost events and shows good cold hardiness.

Newtown Pippen



Newton Pippen fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Famous for being "the oldest commercial grown variety in the US", this variety was developed in Newtown, New York in 1750 and was a favorite of founding fathers such as Jefferson and Washington.

Fruit Characteristics: Greenish-yellow skin with russeting on the shoulders and white speckles covers a similarly colored, firm and textured flesh whose flavors are dominated by bold, unique aromatics and balancing tartness.

Uses: Dual purpose apple valued for culinary and fresh eating. Good keeper (200 days).

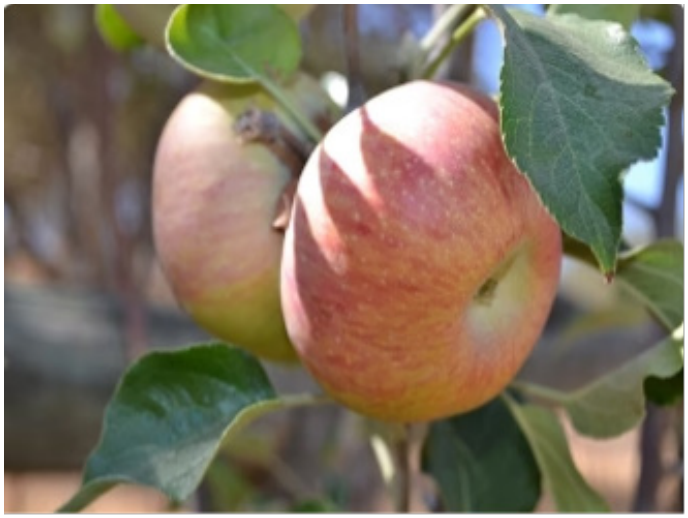
Fruitfulness: Self-fruitful, though fruit set improves with cross-pollination.

Phenology: Late bloom and ripening with a potential for complex flavors that benefit from additional hang time.

Tree Characteristics: Medium-sized tree. Partial tip-bearer.

Site Selection: Zones 4-10. 700 to 1000 chill hours.

Northern Spy



Norther Spy fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A seedling variety originating from Connecticut and first released to the public in New York in the mid-19th century.

Fruit Characteristics: A large apple with thin green/yellow skin overlayed with blush-colored striping. Flesh is firm, yellow to white in color, and crisp with good aromatics and both subtle sweetness and acidity. Known for higher-than-average vitamin C content.

Uses: Suitable for eating, saucing, cider, or pie applications. Good keeper (180 days).

Fruitfulness: Not a strong producer; moderately prone to alternate bearing. Not particularly self-fruitful; a pollinizer of similar bloom time such as Golden Delicious is strongly recommended.

Phenology: Late blooming, leading to a medium to late ripening apple.

Tree Characteristics: Medium to large vigorous tree. Should be grafted onto a rootstock that enhances precocity. Partial tip-bearer.

Site Selection: Zones 4-9. 1000 chill hours.

Pink Lady

Pink Lady fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Also known as Crips Pink, this variety is a long-time commercial favorite introduced from Australia in 1989.

Fruit Characteristics: Medium-sized apple with pink/red coloring over a yellow/green background. Firm, bright white flesh resists browning and boasts a distinct crispness and balance between sugar and acid.

Uses: Dessert apple with a good shelf life that also works well in culinary applications (such as salads) and cider-making due to its flesh's ability to resist oxidative browning.

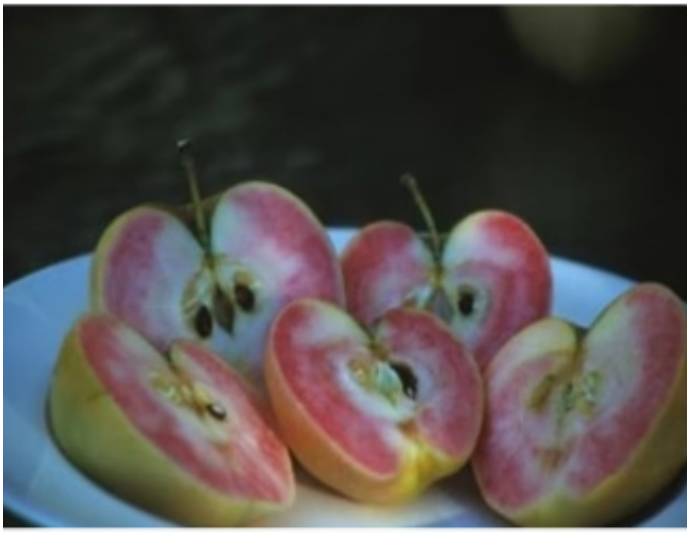
Fruitfulness: Self-fruitful, though a pollenizer of similar bloom time is recommended to improve fruit set.

Phenology: Midseason bloom leads to an extremely late-ripening period.

Tree Characteristics: High susceptibility to fire blight.

Site Selection: Zones 6-10. 300-400 chill hours. Most appropriate for hot climates/low elevations with a long growing season to ripen properly in the Arizona Central Highlands.

Pink Pearl



Pink Pearl fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Known for its distinctive visual appearance, this variety was introduced from California in 1944.

Fruit Characteristics: A medium-sized apple with blush overlayed by a golden skin that covers an unusual, pink fleshed, highly aromatic fruit. Tart to sweet tart, as sugars increase due to hang time.

Uses: Not the longest keeper but enjoyed for fresh- eating and excels in baking applications due to striking coloration.

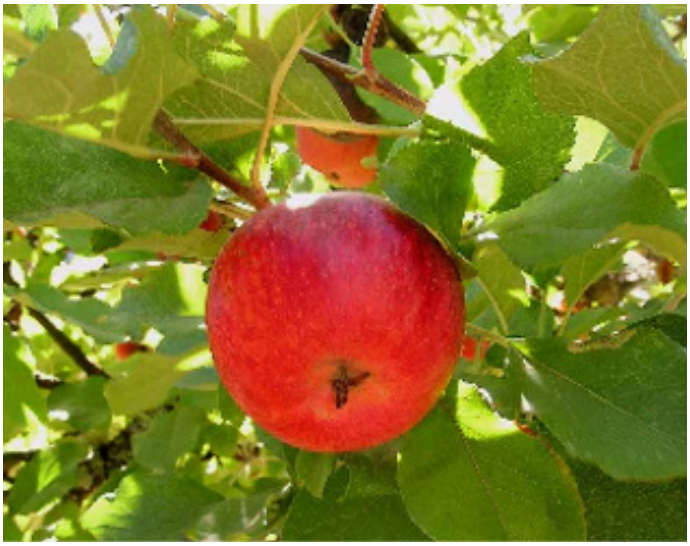
Fruitfulness: A pollenizer of similar bloom time is recommended.

Phenology: Early-season bloom followed by an early-fall harvest.

Tree Characteristics: Abundant pink blossoms in spring make this tree a welcomed addition to the landscape.

Site Selection: Zones 4-10. 600 chill hours.

Red Astrachan



Red Astrachan fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A product of 18th century Russian horticulture that was made available to the public by 1816, this variety made its way to the U.S. in 1835 and remained popular well into the 20th century.

Fruit Characteristics: Medium to large fruit with whitish-green skin covered by crimson stripes that become more pronounced with light exposure. The flesh is yellow/ white with a pronounced tartness that balances out its ample sugar content. Experts note that this apple tends to split as it becomes over-ripe, making harvest timing key.

Uses: Dual purpose and prized for pie making, this apple does not store exceptionally well (only a few weeks).

Fruitfulness: A pollenizer of similar bloom time is recommended.

Phenology: Midseason bloom giving way to an early harvest.

Tree Characteristics: Medium-sized tree.

Site Selection: Zones 4-10. Grows well in hot areas.

Red Fuji

Red Fuji fruit. Photo credit to Dave Wilson Nursery.

Historical context: A clone of the traditional Fuji variety, introduced in the late 20th century.

Fruit Characteristics: A large apple with redder skin than traditional Fuji, its flesh being firm and juicy with a sweet, crisp, and aromatic flavor.

Uses: Excellent storage capabilities (up to 12 months).

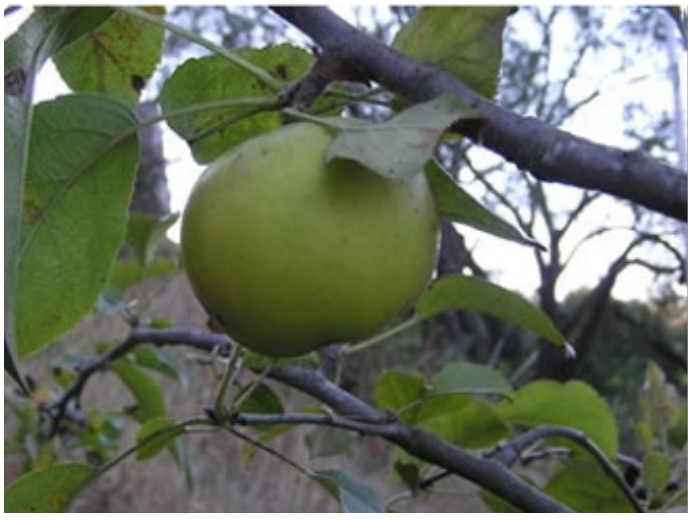
Fruitfulness: Capable of hanging heavy crops. Self-fruitful (and a good pollenizer for other varieties), though a pollenizer of similar bloom time such as Granny Smith or Ben Davis improves pollination.

Phenology: Midseason bloom time leading to a late harvest.

Tree Characteristics: A moderately vigorous tree that puts on 1 to 2 feet of growth per year, unpruned, reaching up to 20 feet tall and 15 feet wide. Reported to have moderate resistance to scab. Partial tip-bearer.

Site Selection: Zones 5-9. 700 chill hours. Exceptionally heat tolerant and suited for the lower latitudes of the United States.

Rhode Island Greening



Rhode Island Greening fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Originating in Mid-17th century Rhode Island, one of the most popular cooking apples in the U.S. up until the early 20th century.

Fruit Characteristics: Medium to large fruit with green skin (which occasionally blushes orange) over firm, juicy green/yellow flesh that boasts a uniquely tart flavor.

Uses: Used primarily for cooking with great storage potential (max. 180 days) but makes a quality eating apple if allowed to fully ripen.

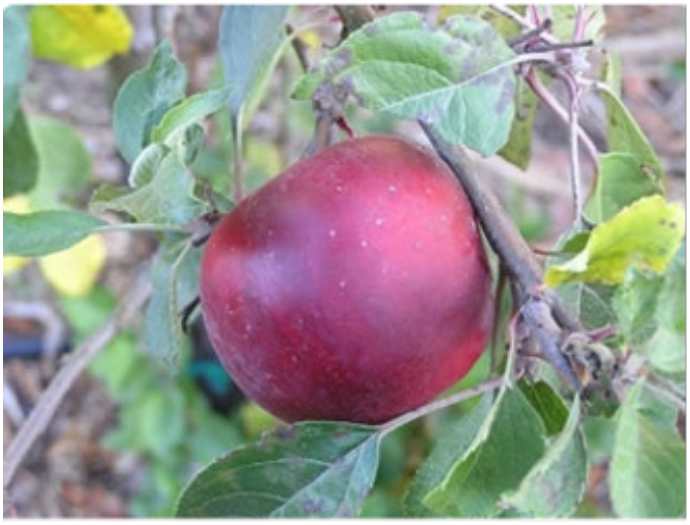
Fruitfulness: Poor precocity and moderately susceptible to alternate bearing, making it only a fair producer. Not self-fruitful due to sterile pollen; a pollenizer of similar bloom time, such as Grimes Golden or Liberty is recommended.

Phenology: Midseason bloom, leading to a mid-to-late-season harvested apple.

Tree Characteristics: Large tree, necessitating proper rootstock selection. Partial tip-bearer.

Site Selection: Zones 4-10.

Rome Beauty



Rome Beauty fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A seedling variety named after its hometown of Rome, Ohio in 1820. Parentage is unknown.

Fruit Characteristics: Large, round fruit with thick, red skin surrounding tangy flesh.

Uses: A very utilitarian variety good for baking/culinary. Good keeper; stores 200 days max.

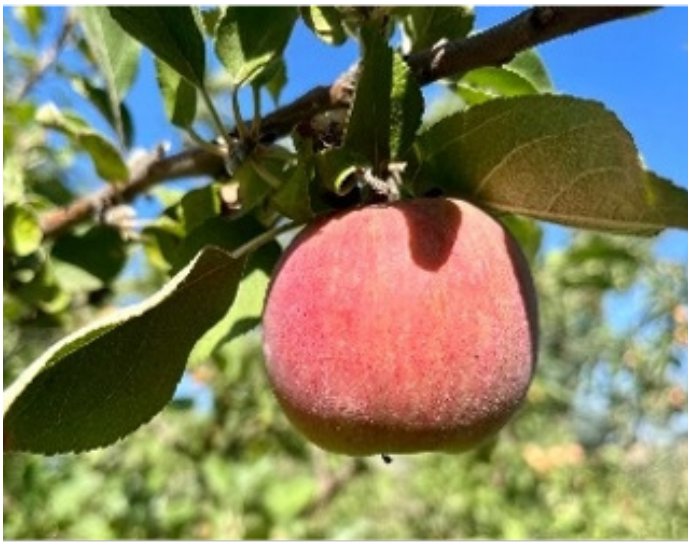
Fruitfulness: A precocious, heavy bearer, though not particularly prone to alternate bearing. Somewhat self-fruitful, though pollination is improved with a compatible pollenizer.

Phenology: Late bud-break, bloom, and ripening variety (160 to 175 days from bloom to harvest).

Tree Characteristics: Small to medium tree with a tendency to spread its limbs. Produces fruit on long spurs. Scab resistant. A true tip-bearing variety.

Site Selection: Zones 6-9. 1000 chill hours. Colors poorly in extreme heat. Recommended for sites prone to late spring frosts.

Snow Fameuse



Snow Fameuse fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: A seedling parent of McIntosh and a traditional mainstay of French settlers of 18th century Canada and the U.S. Stable genetics ensure seeds produce true to type if not cross-pollinated by another variety.

Fruit Characteristics: A small to medium-sized fruit with red skin that becomes darker with increased sunlight and cooler climates. Flesh is bright white (snow) and tender with a unique spicy flavor.

Uses: A multi-use apple, suited for fresh-eating, cider, or culinary endeavors. Keeps for a couple of months.

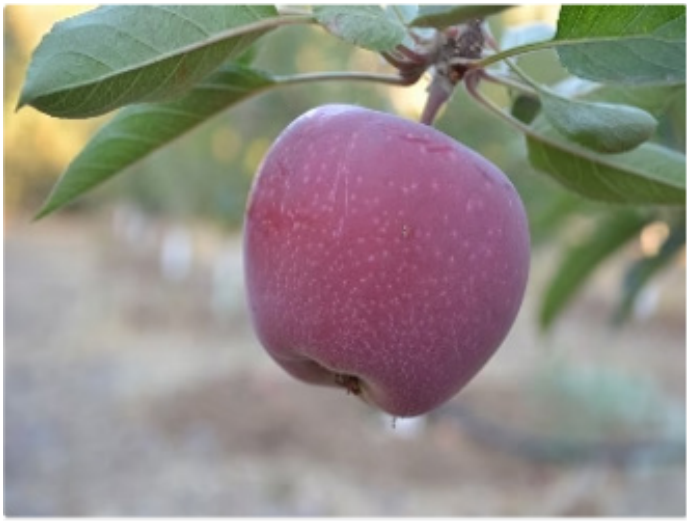
Fruitfulness: Can produce prolific crops, though only weakly self-fertile; a pollenizer of similar bloom time is recommended to ensure a healthy crop.

Phenology: Midseason bloom period followed by a late harvest time.

Tree Characteristics: Known to be long-lived, with excellent overall disease-resistance.

Site Selection: Zones 3-10. 600 chill hours or less.

Sweet 16



Sweet 16 fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Developed at the University of Minnesota in the 1970s with Northern Spy and Frostbite (MN477) parentage.

Fruit Characteristics: A large fruit with red over yellow skin and prominent white lenticels, covers uniquely yellow flesh that harbors complex flavors including spice, citrus, and vanilla.

Uses: Multiple uses, including fresh eating, cider, pies, and sauces. Keeps for 5 to 8 weeks.

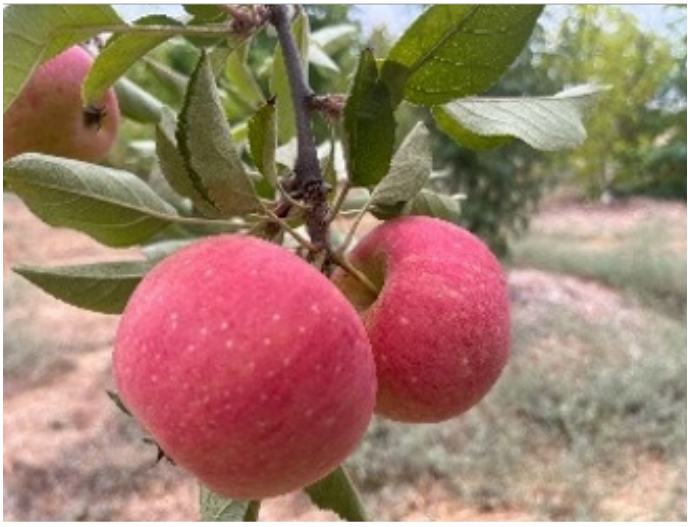
Fruitfulness: Tree tends to alternate bear if not thinned appropriately. Not self-fertile; a pollenizer of similar bloom time is recommended.

Phenology: Midseason bloom followed by a midseason harvest.

Tree Characteristics: Fire blight resistance.

Site Selection: Zones 3-9. Chill hours are estimated to be between 700 and 1,400. Excellent cold hardiness.

Waltana



Waltana fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: An heirloom seedling variety grown from Wagener and known as the "Etter Apple", after Albert Etter, the breeder who developed it in the early 20th century.

Fruit Characteristics: A medium to large fruit with red coloring over green skin that covers firm, juicy flesh. Fruit improves in flavor and sweetness after it has experienced a fall frost.

Uses: Fresh eating, pies, saucing.

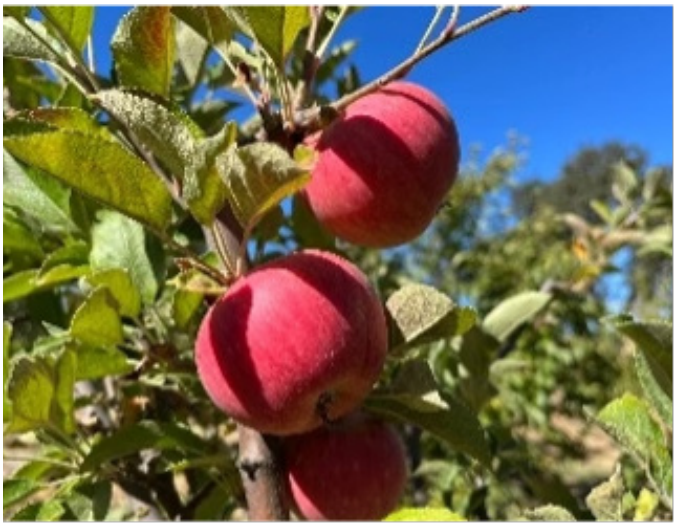
Fruitfulness: Long blooming season makes it an excellent pollinator. A dependable crop producer, with fruit set improved by a pollenizer of similar bloom time.

Phenology: Late bloom avoids frost and leads to an exceptionally late harvest. This tree requires an extremely long hang time to achieve full ripeness.

Tree Characteristics: Good vigor, leading to 12 to 16-foot tree on a semi-dwarf rootstock with an 8-foot width.

Site Selection: Zones 6-9. 800-1000 chill hours. Does best in the hotter climates of the Central Highlands such as Verde and Skull Valley.

Winesap



Winesap fruit. Image courtesy of Trees of Antiquity, LLC

Historical context: Long time favorite apple originating in New Jersey in the 18th century and named for the complex, wine aromas that emanate from the fruit.

Fruit Characteristics: Medium-sized apple with red skin wrapped around yellow flesh that is described as juicy and smooth-textured. Flavors are a complex blend of sweetness, tart, and spice. Fruit requires an extremely long hang-time to achieve full ripeness.

Uses: Fresh-eating and good for cooking.

Fruitfulness: A heavy producer that has sterile pollen requiring a pollenizer of similar bloom time such as Grimes Golden, Golden Delicious, Fuji, Gala or Liberty.

Phenology: Mid-to-late bloomer that is harvested late season, requiring 160 to 180 days from bloom to harvest.

Tree Characteristics: Upright, spreading tree that is resistant to fire blight and scab.

Site Selection: Zones 5-9. 800 chill hours.

William Marmaduke, Ph.D., Steve Miller, and Rafael Routson, Ph.D. for sharing their variety recommendations, based on first-hand growing experience in the Arizona Central Highlands.

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