

Register of New Fruit and Nut Varieties

Brooks and Olmo

List 36

Edited by James N. Cummins

Department of Horticultural Sciences, New York State Agricultural Experiment Station,
Cornell University, Geneva, NY 14456

ALMOND

Dale E. Kester

Department of Pomology, University of California, Davis

Aldrich.— Discovered in 1973 by Everett and Randall Aldrich as a chance seedling adjacent to a commercial orchard near Hughson, Calif. Plant patent 5320,6 Nov. 1984; assigned to Maryanne, Clarence, and Randall Aldrich. Introd. in 1984. Nut: soft to paper shell; well sealed. Kernel: ovate; width : length ratio = 0.55; slightly plump; medium to small size; somewhat wrinkled; few doubles; resembles Thompson. Matures 2 weeks after Nonpareil. Easy to harvest and to hull. Tree: large; medium-upright. Blooms with Nonpareil; cross-pollinates with Nonpareil, Carmel, Fritz, Monterey, and Price.

Ayles.— A self-fertile, late-blooming, open-pollinated seedling of Tuono. Introd. in 1987 in Zaragoza, Spain, by Antonio Felipe and Rafael Socias i Company, Unidad de Fruticultura. Naturally autogamous due to coincidence of anthers and stigma. Blooms late (mid- to late March in central Spain), 10 to 14 days after Nonpareil and 1 day after Ferragnes. Nut is very hard shelled (30% to 34% kernel). Kernel: heart-shaped (width : length = 0.64), few doubles, medium to large, good commercial quality. Matures in late September. Low sensitivity to late frosts. Tree medium in size, spreading, relatively compact growth, fruit on spurs.

Cruz.— Discovered in 1970 by Irwin H. Bonds as a chance seedling adjacent to a commercial almond orchard near Cressey, Calif. First tests established in 1978. Plant patent 7497, 16 Apr. 1991; assigned to Ruben A. Cruz, Modesto, Calif.; introd. in 1991. Nut: medium size; ovate; softshell (60% kernel); well sealed. Kernel: medium size; somewhat rounded; width : length ratio = 0.71; moderately plump; somewhat wrinkled; few doubles. Ripens 7 to 10 days after Nonpareil; easy to harvest and to hull. Tree: medium size; upright, open; heavy, consistent production. Bloom begins \approx 3 days before Nonpareil and extends for longer period.

Ferragnes.— A very late-blooming, precocious introduction from Sta. Rech. de Arb. Fruit. de la Grande Ferrade, INRA, France. Tested at La Grande Ferrade, Manduel, and Nimes. Introd. in 1969 by Charles Grasselly. Cristomorto \times Ai. Blooms very late (after Texas). Nut: hardshell (shelling percentage = 30 to 43); kernels large, elongated (width : length = 42), brown, somewhat wrinkled, and pubescent. Nuts mature in mid-September, 2 to 3 days after Nonpareil. Self-incompatible. Tree is vigorous, precocious, and productive.

Ferraduel.— Introd. in 1969 by Charles Grasselly, Sta. Rech. de Arb. Fruit. de la Grande Ferrade, to provide cross-pollinizer for Ferragnes. Cristomorto \times Ai. Tested at INRA, La Grande Ferrade, Manduel, and Nimes, France. Similar to Ferragnes. Nut: hardshell (shelling percentage = 28); kernel large, flat, very thin integuments.

Guara.— A frost-tolerant, self-fertile introduction by Antonio Felipe and Rafael Socias i Company, Unidad de Fruticultura, Zaragoza, Spain. Introd. in 1987. Unknown origin; discovered in 1974 in a variety collection under an incorrect name, freed from known viruses, and tested with Ayles and Moncayo. Fruit matures early (first of September). Nut: very hardshelled (32% to 35% kernel); kernel is ovate (width : length ratio \approx 0.59), medium to large, few double kernels, good commercial quality. Naturally autogamous due to coincidence of anthers and stigma. Blooms in mid-March in central Spain,

approximately with Ayles; high density of medium-sized blossoms on spurs. Blossoms have low sensitivity to frost. Tree: medium size and spreading, somewhat compact.

Hashem II.— Discovered in 1976 by Hashem Naroghi as a limb sport in a commercial almond orchard near DeNair, Calif. Plant patent 4845, 11 May 1982; introd. in 1980. Nut: softshell. Kernel: large, long, flat, similar to Nonpareil; few doubles. Blooms with Nonpareil but extends later. Ripens just after Nonpareil. Tree: slightly smaller than Nonpareil; upright; productive. Bears in clusters.

Kochha.— A high-yielding seedling from the cross Greek \times Nonpareil made by P. Spiegel-Roy and J. Kochba in 1967 at Volcani Center, Bet Dagan, Israel. Introd. in 1985. Nut: semi-hard; completely sealed with retention of outer cork; shelling percentage \approx 51; kernel oblong-ovate (width : length = 60), relatively flat, smooth, light-colored; few double kernels; good flavor. Flowering early, before Ne Plus Ultra. Tree: medium size, larger than Ne Plus Ultra; drooping branches; somewhat difficult to train. Bears predominantly on spurs. Consistently higher yielding than other selections of the same series.

Livingston.— Discovered by P.P. Hill, Modesto, Calif., as a chance seedling. Plant patent 4116, 27 Sept. 1977; assigned to Burchell Nursery, Modesto. Introd. in 1977. Nut: paper shell, well sealed; kernel medium size. Blooms 3 days after Nonpareil and matures 8 days after Nonpareil. Tree: medium size, semi-upright, resembles Nonpareil. Easy to harvest.

Lodi.— Discovered by Irwin H. Bonds in 1976 as a chance seedling adjacent to a cultivated orchard near Manteca, Calif. Tests established in 1977. Plant patent 7068, 12 Dec. 1989. Nut: ovate; softshell; well sealed; shelling percentage \approx 60. Kernel: medium to large; somewhat broad; width : length ratio = 0.62; medium thick; few doubles; slightly bitter flavor. Matures \approx 1 week after Nonpareil. Tree: average size; medium shape. Compatible with Marianna 2624 rootstock. Blooms about with Nonpareil.

Monarch.— Introd. by Theodore J. Moschitto, Modesto, Calif., in 1982. Plant patent 4852; 15 May 1982; assigned to Burchell Nursery, Modesto. Nut: semi-hardshell with good seal; kernel large, plump. Blooms 1 day after Nonpareil; matures 7 days after Nonpareil. Tree large and upright, similar to Mission but growth in other tests was smaller.

Moncayo.— A frost-tolerant selection from the Tardive de la Verdere \times Tuono cross, introd. in 1987 by Antonio Felipe and Rafael Socias i Company, Unidad de Fruticultura, Zaragoza. Cross made in 1974. Shell is very hard; shelling percentage = 25 to 28; kernel oblong (width : length = 0.56), medium to large; few doubles; good commercial quality. Blooms in late March, 2 or 3 days after Ayles; profuse blooming on spurs. Low sensitivity to late frosts. Self-compatible; reported to be naturally autogamous due to coincidence of anthers and stigma. Tree: medium to large, spreading to drooping, but easy to train. Fruits mature in mid-September.

Plateau.— Discovered by Leonard D. James, Modesto, Calif., as a chance seedling. Plant patent 4739,9 June 1981; assigned to Burchell Nursery, Modesto. Introd. in 1981. Blooms 2 days after Nonpareil and matures in mid-September, 8 days after Nonpareil. Nut is soft-shelled, well sealed; kernel large. Tree medium size, semi-upright.

Samish.— Originated as a seedling selection from Marcona \times Greek cross made in 1966 at the Volcani Center, Bet Dagan, Israel by P. Spiegel-Roy, Joshua Kochba, and R. Iris. Selected in 1970, introd.

in 1982. Israel patent pending. Nut: semi-hard (41% kernel), completely sealed, light-colored, and smooth. Kernel: uniform, smooth, elongated to somewhat rounded; size medium, but small with heavy crop. Low number of doubles. Adapted to in-shell, kernel, and confectionary trade. Blooms early, before Ne Plus Ultra. Cross-compatible with Ne Plus Ultra and Um el Fahm. Bears predominantly on spurs but some on other shoots. Well adapted to mechanical harvest. Yield has been high. Tree: growth vigorous and large.

Supernova.— A self-compatible radiation mutant produced at Fruit Research Institute, Rome, Italy, by F. Monastra, G. Della Strada, C. Fidighelli, and R. Quarta. A plant of the self-incompatible cultivar Fascinello was subjected to ionizing radiation (Co^{60} , at 3 kR) in 1970. Introduced in 1987. Nut: semi-hardshell (40% kernel), 15% doubles; kernel elliptical-elongated (width : length = 0.54), large, veined. Blooms late. Maturity is moderately early. Tree: average vigor, medium erect, precocious. Susceptible to *Monilia*. High regular production in all areas of central Italy.

Wood Colony.— Discovered by David E. Blickenstaff, Modesto, Calif., as a chance seedling. Plant patent 5583,3 Dec. 1985; assigned to Burchell Nursery, Modesto. Introduced in 1985. Nut: semi-soft with good seal; kernel medium size, plump. Blooms 2 days after Nonpareil, matures 7 days after Nonpareil. High yield potential on small to medium-sized spreading tree. Pollen is in the CIG-4 group.

ALMOND ROOTSTOCKS

Adafuel.— Originated in 1970 as an almond × peach selection from an open-pollinated population of Marcona at E.E. Aula Dei, Zaragoza, Spain. Introduced by R. Cambra in 1990 as an easy-to-root, vigorous hybrid clone for almond and peach. Tests show higher rooting by hardwood cuttings than GF 677. Resistant to *Sphaeroteca pannosa*, *Tranzschelia pruni-spinosa*, and *Coryneum beijerinckii* but susceptible to *Agrobacterium tumefaciens* and *Meloidogyne* species. One-year-old shoots are intensely red; shoots long with little lateral shoot growth. Fruit is intermediate between almond and peach.

APPLE

Roger D. Way and Susan K. Brown
New York State Agricultural Experiment Station, Geneva

Carousel™ (Caudle cv.)—A chance seedling discovered in the Smith-Caudle orchard near Dryden, Wash., in the 1980s. U.S. plant patent applied for. Fruit: attractive bright red stripe over yellow-green ground; round; size medium to large; round to slightly elongated; flesh firm and creamy-white; flavor sweet-tart; eating quality very good. Matures with Rome Beauty. Stores well until late June; not subject to scald. Tree: vigorous, many spurs produced; hardy; precocious and productive.

Charden.-A triploid yellow-skinned apple introd. in France about 1975. Fruit: size large, 70 to 80 mm; skin yellow-green, sometimes with 10% faint pink blush; less russet than Golden Delicious; shape round-conic, less conic than Golden Delicious. Flesh very firm, juicy, yellow; flavor slightly acid, more tart than Golden Delicious, sometimes slightly astringent; eating quality fair to medium good; some resemblance to Mutsu. Tree: vigorous; very productive; large leaves.

Co-op 30.— See Enterprise.

Co-op 32.— See Pristine™.

Co-op 38.— See GoldRush.

Early Thompson.-A good-quality summer apple orig. at the U.S. Dept. of Agriculture (USDA) Georgia Mountain Branch Experiment Station, Blairsville, by J.M. Thompson, USDA Agriculture Research Service. Introduced in 1993 jointly by USDA and Univ. of Tennessee. NJ 125355 × NJ 6055; cross made in 1963 by L.F. Hough and Catherine Bailey at Rutgers Univ., New Brunswick, N.J.; selected at Blairsville by J.M. Thompson in 1971. Tested as 634011-96. Not patented. Fruit: firm, attractive; skin 80% bright red on pale-yellow ground; flesh white, fine, juicy. Fruit quality good to very good; flavor mild with good balance. Size medium; heavy thinning required to achieve 68 to 70 mm diam. and to avoid biennial bearing. Ripens in

early summer for pick-your-own and local markets; adapted to Southern highlands. Tree: vigorous; spreading; similar to Rome Beauty in susceptibility to fire blight. Chilling requirement >1200 h.

Elista™.— A natural mutation of Elstar found in the orchard of M. Peter in France in 1983. Differs from the parent variety only in having much more and brighter red-striped skin surface, which permits complete harvest in two pickings. Storage until February if picked early.

Enterprise (Co-op 30).— A high-quality winter apple with multiple disease resistances, orig. in West Lafayette, Ind., by a cooperative breeding program consisting of the agricultural experiment stations of Indiana, New Jersey, and Illinois. Introduced in 1993 by J.A. Crosby, J. Janick, P.C. Pecknold, Joseph Goffreda, and S.S. Korban. U.S. plant patent applied for; assigned to Purdue Research Foundation, West Lafayette. Parentage: PRI 1661-2 × PRI 1661-1; pedigree includes McIntosh and Delicious. Tested as PRI 2693-1. Fruit: size medium to large, 70 to 75 mm; skin glossy, very bright, dark red on green-yellow to deep yellow ground; flesh pale yellow to cream-colored; texture medium fine, crisp, breaking; flavor moderately acid. Harvest season 2.5 weeks after Delicious; fruit hangs well on tree. After 6 months in refrigerated storage, excellent texture, mildly acid, slightly spicy, full flavored. Immune to apple scab (*V.gene*); resistant to fire blight and cedar apple rust; moderately tolerant to powdery mildew. Tree: moderate to high vigor; spreading; cropping moderate, annual; bloom late; fruits borne singly on moderate-length spurs.

Galasupreme™ (Davis cv.)—A chance seedling (not a Gala sport) found growing from the root of a Delicious tree in the orchard of Nick Davis, Wenatchee, Wash. Introduced about 1992. U.S. plant patent pending. Fruit: similar in appearance to Gala with yellow ground covered with a red-orange stripe; size medium to large; flesh firm and crisp; resists browning when exposed to air; flavor sweet. Tree: resembles Rome.

Golden Glory™.— A semi-spur limb mutation of Smoothee®, discovered by Dan Simmons in Ohio. Tested as DS-165. Registered but not patented; assigned to Newark Nursery, Hartford, Mich. Fruit: similar to Golden Delicious, except semi-spur and very smooth skin.

GoldRush (Co-op 38).— A high-quality, yellow, winter apple resistant to apple scab and powdery mildew, orig. in West Lafayette, Ind., by a cooperative breeding program consisting of the agricultural experiment stations of Indiana, New Jersey, and Illinois. Introduced in 1993 by J.A. Crosby, J. Janick, P.C. Pecknold, Joseph Goffreda, and S.S. Korban. U.S. plant patent applied for; assigned to Purdue Research Foundation, West Lafayette, Ind. Parentage: Golden Delicious × Coop 17 has complex parentage, including Winesap. Tested as PRI 2750-6. Fruit: size medium, typically 65 to 75 mm (requires thinning); larger in warmer areas; skin deep yellow, nonwaxy, thin, conspicuous russeted lenticels. Flesh pale yellow, very firm, medium coarse, crisp, breaking, juicy; flavor tart at harvest, developing very rich, well-balanced flavor after a few weeks in storage. Harvest season 25 days after Delicious; outstanding storage life. Tree: moderately vigorous, semi-spur with strong central leader. Immune to apple scab (*V.gene*); moderately resistant to fire blight; susceptible to cedar apple rust; moderately tolerant to powdery mildew.

Gourmet Golden™ (Keystone).—A chance seedling discovered by Randy Wick in Keystone Orchards, Riverside, Wash. U.S. plant patent 7209, 3 Apr. 1990; propagation rights assigned to North American Tree Co., Portland, Ore. Parentage: probably Delicious × Golden Delicious. Fruit: medium to large; typical Delicious shape; skin smooth in Pacific Northwest, sometimes slightly russeted in the East; attractive pink blush in most areas; flesh cream-colored, firm, crisp. Harvest season just before Rome Beauty; much less subject to bruising. Highly aromatic; very low acid; flavor excellent from controlled-atmosphere storage. Shelf life after storage similar to Delicious. Tree: vigorous; nonspur; upright-spreading.

Griffspur.— See Spur Goldblush.

Hardy Cumberland.— Orig. at the U.S. Dept. of Agriculture (USDA) Georgia Mountain Branch Experiment Station, Blairsville. Introduced jointly by the USDA and the Univ. of Tennessee Plateau Experiment Station, Crossville. Not patented. Parentage: Lyons × Detroit Red; cross made at Blacksburg, Va., in 1961. Fruit: large, >70 mm; shape round-oblate; color 80% washed and striped carmine; flesh