Register of New Fruit and Nut Varieties

List 40

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Crop Listings[1]: Almond, Apple, Avocado, Black Walnut, Blackberry, Canistel, Carambola, Citrus, Currant, Grape, Jackfruit, Nectarine, Peach, Pecan, Plum, Raspberry, Strawberry

ALMOND

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Antoneta.—A late-flowering, self-compatible, and hard-shelled Marcona-type almond. **Origin:** by J.E. Garcia, J. Egea, F. Dicentra, and T. Berenguer, Murcia, Spain, from a cross between Ferragnes and Tuono. USPPAF[2]. **Bloom:** ≈1 week later than Nonpareil, 2 days before Ferragnes. Shows small, wrinkled, white petals with a stigma bent toward the anthers at anthesis. Self-compatible and self-pollinating (autogamous) with an average 37% natural set. Double floral buds commonly producing a high flower density that is greater than the Ferragnes parent. Flowers and twigs are more resistant to *Monilinia* spp. and frost than Ferragnes parent. **Nut:** hard shell with very good shell seal with harvest ≈15 days after Nonpareil. **Kernel:** rounded, Marcona-type, ≈25 mm in length, 17 mm in width, and 8 mm thick, and 1.3 g/nut. About 35% kernel to nut by weight with low doubles. **Tree:** very vigorous, spreading tree with a relatively high number of lateral branches on primary scaffolds early in growth. Productive, primarily borne usually on spurs.

Avalon.—California almond type, being a suitable pollinator for both the Nonpareil and Carmel varieties. **Origin:** USPP[2] 11096 in 1999 by Charles Mancebo, Atwater, Calif., from a chance seedling of unknown parentage. **Bloom:** ≈3 days earlier than Nonpareil. Each petal has an obtuse tip at the base and a distinctive notch at the apex. **Nut:** paper-shell that is well sealed, with harvest ≈8 days after the Nonpareil variety and ≈6 to 7 days earlier than the Carmel variety. A thin and prominent wing extends uniformly from the base to the apex. It is considered fairly wide in relative comparison to other varieties. The dorsal fruit suture is relatively shallow but distinct before dehiscence. The immature nut dehisces on the ventral edge only. This is quite clean and distinct. In many nuts, the hull pulls away with the outer shell layer still attached to the inner hull. **Kernel:** medium size as compared to other varieties, and being ≈21 mm in length, 12 mm in width, and 9 mm thick. The kernel is darker and more oval than that produced by the Nonpareil with ≈64% shelling percentage. **Tree:** average in size and vigor, smaller and having a much more upright growth habit when compared to Nonpareil. Productive, cropping predominantly from short and stubby spurs that are 2 years old or older

Garden Princess.—Self-fertile almond with small size tree, upright in growth, being a regular and productive bearer of medium size, soft shell, sweet kernel almonds. **Origin:** USPP 5146 in 1983 by Chris F. Zaiger, Modesto, Calif. From the cross [(Merced x genetic dwarf peach seedling with double red flowers) selfed]. **Bloom:** dark pink bloom ≈4 to 5 days after Merced. **Nut:** paper shell with harvest approximately with Mission. **Kernel:** ≈19 mm in length, 11 mm in width, and 8 mm thick. About 58% kernel to nut by weight. **Tree:** leaf glands: 2–4 (usually two) and alternate, primarily on petiole. Nuts borne usually on spurs though also with production on shoots.

Kahl.—Medium size, upright tree with well-sealed nuts. **Origin:** USPP 9282 in 1995 by Marvin Kahl, Merced, Calif. Chance seedling in a Nonpareil, Davey, and Mission planting. **Bloom:** blooming ≈3 days later than Nonpareil, having a pink instead of white blossom. **Nut:** semi-hard shell with good shell seal but a moderate number of blanks and with harvest being ≈14 days after Nonpareil. **Kernel:** large, flat kernels ≈28 mm in length, 13 mm in width, and 8 mm thick with ≈1.1 g/nut. About 44% kernel to nut by weight. Moderate to numerous doubles. Crop moderate, borne mostly on spurs with some on shoots and close to larger branches.

Marta.—A late-flowering, self-compatible, and hard-shelled Desmayo Largueta-type almond. **Origin:** by J.E. Garcia, J. Egea, F. Dicentra, and T. Berenguer, Murcia, Spain, from a cross between Ferragnes and Tuono. Patent pending. **Bloom:** ≈2 days later than Nonpareil, 6 days before Ferragnes. Shows large, smooth, white petals with a straight stigma ending at anther height at anthesis. Self-compatible and partially self-pollinating (autogamous) with an average 28% natural set. Double floral buds commonly producing a high flower density that is greater than the Ferragnes parent. Flowers and twigs are more resistant to *Monilinia* spp. and frost than Ferragnes parent. **Nut:** hard shell with very good shell seal with harvest approximately with Nonpareil. **Kernel:** elongated, Desmayo Largueta type, ≈26 mm in length, 15 mm in width, and 9 mm thick and 1.4 g/nut. About 32% kernel to nut by weight with low doubles. **Tree:** very vigorous, upright tree with relatively few lateral branches on primary scaffolds early in growth. Productive, nuts primarily borne on spurs.

Morley.—Very late blooming Butte-type almond with good vigor and moderately dense foliage. **Origin:** USPP 8269 in 1993 by Lowell G. Bradford and Norman G. Bradford, Le Grand, Calif. From a cross of Mission (Texas) to an unnamed late blooming almond seedling as pollen parent. **Bloom:** ≈2 weeks later than Nonpareil, 1 week later than Mission (Texas). **Nut:** semi-hard shell with good shell seal but moderate blanks with harvest ≈14 days after Nonpareil. **Kernel:** dark, medium-sized Butte type. About 22 mm in length, 13 mm in width, and 8 mm thick and 1.2 g/nut. About 56.4% kernel to nut by weight. **Tree:** vigorous, large and somewhat upright. Leaf glands globose, averaging 4 to 6 per leaf, mostly oppositely positioned on petiole and base of blade. Borne usually on spurs though with considerable production on shoots, often on smaller fruiting wood.

Ne Plus Ultra.—A very old and very early-blooming almond still used for pollination of Nonpareil early bloom. **Origin:** Selected by A.T. Hatch in 1879 from open-pollinated seed thought to be from the Lanquedoc region of France. **Bloom:** ≈5–7 days before Nonpareil and thus susceptible to frost. **Nut:** large nut with well-sealed paper shell and harvest ≈14 days after Nonpareil. **Kernel:** large, often with a high percentage of doubles. **Tree:** medium size with spreading, somewhat willowy growth habit. Crops moderate, sometimes showing precocious bearing on long, previous-season shoots followed by heavy spur production.

Peerless.—An old, early-blooming almond still planted as an early-season pollinizer for Nonpareil bloom and sold primarily to the in-shell market. **Origin:** selected before 1900 by Wilson Treat of Davis, Calif., from unknown origins. **Bloom:** ≈3–5 days before Nonpareil and thus susceptible to frost. **Nut:** large, light colored, with a hard and well-sealed shell, harvested ≈10 days after Nonpareil. Moderate crop, with a tendancy to drop nuts prematurely. **Kernel:** medium size and quality. **Tree:** medium size, medium to spreading in growth habit and occasionally showing moderate to severe noninfectious bud failure.

Rosetta.—Early-blooming, Nonpareil-type almond used as a pollinizer for the early Nonpareil bloom. **Origin:** USPP 8236 in 1993

[1]Thanks to the crop editors for compiling this information. Individuals with varieties to describe should contact the crop editors directly. Individuals willing to serve as crop editors should contact W.R.O.

[2]USPPAF = U.S. Plant Patent Applied For; USPP = U.S. Plant Patent.

by William Spoto, Yuba City, Calif., from an almond chance seedling found in an almond seedling rootstock orchard of Nonpareil and Drake that had been planted in the early 1900s. **Bloom:** ≈3 days before Nonpareil. **Nut:** medium to large size with moderate shell seal and harvest just after Nonpareil. The suture of the shell has a wing more prominent than that of Nonpareil. **Kernel:** Nonpareil type but larger. About 27 mm in length, 14 mm in width, and 9 mm thick and 1.3 g/kernel. About 51% kernel to nut by weight. **Tree:** upright in structure. Leaf glands globose, averaging 2 per leaf, mostly alternately positioned on petiole and base of blade. Crop borne usually on spurs though with considerable production on shoots, often on smaller fruiting wood.

Savana.—Very late-blooming, Nonpareil-type almond with moderate vigor. **Origin:** USPP 8270 in 1993 by Lowell G. Bradford and Norman G. Bradford, Le Grand, Calif., from cross of Nonpareil to an unnamed late-blooming almond seedling as pollen parent. **Bloom:** ≈2 weeks after Nonpareil and 1 week later than Mission (Texas). **Nut:** Nonpareil type with very good shell seal and harvest ≈2 weeks after Nonpareil and 2 weeks earlier than Mission (Texas). **Kernel:** Nonpareil type with large, flat, light-colored seed, ≈25 mm in length, 12 mm in width, and 7 mm thick and 1.2 g/nut. About 61.6% kernel to nut by weight. **Tree:** medium in size moderately vigorous and spreading in growth. Crop borne almost entirely on spurs and on all sizes of wood. Leaf glands globose, mostly 2 or 3 per leaf being alternately positioned on petiole and base of blade.

Valenta.—Semi-hard shell seedling almond. **Origin:** USPP 4885 in 1982 by Frank E. Valenta, Delhi, Calif., as a chance seedling. **Bloom:** blooms white during period ≈2 weeks earlier than Thompson and ≈2 days after the Nonpareil. **Nut:** semi-hard shell with moderate shell seal with harvest period after the Thompson and Nonpareil and approximately with the Merced variety. **Kernel:** ≈21 mm in length, 11 mm in width, and 8 mm thick and 1.1 g/nut. About 56% kernel to nut by weight. Medium size, sweet kernels of good quality. **Tree:** large, spreading, dense, and vigorous; abundantly foliated with small, lanceolate, acutely pointed leaves having a finely serrate margin, and small, green, alternate, globose glands. Consistent bearer of small, well-sealed nuts.

APPLE

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A5510.—See Snapp Stayman.

Adams Apple (*Burchinal*).—An extremely early-coloring strain of Red Delicious. **Origin:** limb mutation of Oregon Spur Delicious, discovered Sept. 1993 in Othello, Wash., by Robert Burchinal; introd. 1999 by Van Well Nursery, Wenatchee, Wash. USPPAF. **Fruit:** develops 100% red color at fruit set, with darker red color than its parent throughout its development; otherwise, similar to parent in all respects. **Tree:** upright, spur type, similar to parent.

Autumn Gala (*Harry Black Gala*).—A late-maturing sport of Gala. **Origin:** limb sport of Kidds D-8 Gala, found at Catoctin Mountain Orchard, Thurmont, Md., in 1992 by Bob Black. Introd. 1999; assigned to International Plant Management, Inc., Lawrence, Mich. USPPAF. **Fruit:** typical size, shape, and quality of Kidds D-8, maturing 6 weeks later than the parent; flesh much firmer than parent's, 18–23 pounds at maturity. **Tree:** same as parent. Recommended for fresh market in warmer climates where regular Gala matures too soon.

Auvil Early Fuji (*Fuji 216*).—Strain of Fuji ripening 3–4 weeks earlier than standard Fuji. **Origin:** limb mutation of TAC 114 Fuji; discovered Sept. 1993 at Vantage, Wash. Introd. 1998; assigned to Van Well Nursery, Wenatchee, Wash. USPP 10141. **Fruit:** 90% to 95% pink-red skin over yellow ground color; flesh texture, color, and flavor similar to parent's, but maturity is 145–150 days from full bloom, 3–4 weeks earlier than TAC 114 Fuji or standard Fuji. **Tree:** similar to standard Fuji, but with less vigor than parent.

Bull McIntosh.—See LindaMac.

Burchinal.—See Adams Apple.

Co-op 25.—See Scarlet O'Hara.

Crown Empire.—Empire mutation suited to the Northeast. **Origin:** limb sport of Empire, discovered in 1993 by Jeff Crist, Walden, N.Y. USPPAF. Assigned to Adams County Nursery, Aspers, Pa. **Fruit:** full red blush color develops 10 days ahead of Empire. **Tree:** same as Empire.

Del Red Rome.—A nonbleeding mutation of Red Rome Beauty. **Origin:** discovered 1990 by Del Nanney in Dana, N.C., as a whole-tree mutation of Barkley Red Rome. **Fruit:** similar to Barkley, but the skin has a darker stripe over the blush-red color; more significant is that the skin color does not bleed into the flesh as occurs with Law Red Rome. This is important for processing. **Tree:** similar to Barkley Red Rome.

Fuji 216.—See Auvil Early Fuji.

Harry Black Gala.—See Autumn Gala.

Harten Mac.—See Scotian Spur Mac.

LindaMac (*Bull McIntosh*).—An early-coloring red mutation of Redmax. **Origin:** whole-tree mutation of Redmax found in 1997 in the orchard of Leslie and Linda Bull, Casnovia, Mich. Released Fall 1999; assigned to International Plant Management, Inc., Lawrence, Mich. USPPAF. **Fruit:** medium to large, round, short stem, 100% red blush with typical McIntosh texture and flavor. Maturity with Redmax. **Tree:** very vigorous, upright, precocious; otherwise same as parent.

Scarlet O'Hara (*Co-op 25*).—A high-quality, scab-resistant introduction from Purdue, Rutgers and Illinois (PRI) . **Origin:** PCFW2-134 X PRI669-205, cross made at NJAES in 1971, screened for scab resistance at Purdue and designated CLR 20T41. Seedling selected by E.W. Williams in 1978, released as Coop 25 in 1984 and named in 1999 by J. Janick, J.C.Goffreda, and S.S. Korban. USPPAF. **Fruit:** bright red skin, blocky shape, large size; flavor mildly rich, very crisp and firm, ripening mid-September, 1 week before Delicious. Quality best after 1–2 months storage; storage life over 7 months at 1 °C regular storage. Though resistant to scab, it is susceptible to fireblight and moldy core. **Tree:** moderately spreading and very productive; similar to Rome Beauty.

Scotian Spur Mac (*Harten Mac*).—A spur strain of McIntosh, with excellent color and size. **Origin:** limb mutation from top of 80-year-old standard McIntosh discovered in Waterville, Nova Scotia, in 1994 by Jacob Hartenhof. USPP 10070. Assigned to Adams County Nursery, Aspers, Pa. Introd. 1998. **Fruit:** typical McIntosh size and shape, with improved color. **Tree:** uniform compact spur-type character, upright in growth, and 60% the size of conventional McIntosh.

Snapp Stayman (*A5510*).—Improved red strain of Red Stayman. **Origin:** discovered in 1989 by Alfred Snapp, Winchester, Va., as a limb mutation of Red Stayman 201. USPP 11071. Assigned to Adams County Nursery, Aspers, Pa.; introd. 1997. **Fruit:** similar to its parent, except with a deeper red color intensity and finish. **Tree:** same as Red Stayman.

Tex Red Winesap.—Higher-colored mutation of Red Winesap. **Origin:** discovered in 1985 by John Ford, Malaga, Wash. Whole-tree mutation of Ruble Red Winesap. **Fruit:** similar to Ruble Red Winesap except for higher skin color. **Tree:** identical to Red Winesap.

AVOCADO

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Murashige.—Guatemalan well adapted to Hawaii. **Origin:** Hawaii. **Fruit:** heavy bearer with dark green pyriform fruit, rough thick skin. Weight 450–550 g. Pulp moisture 71%, 20% oil, edible portion 65% to 71%, internal color light yellow; mild to nutty flavor, spring and summer production. Seed small. **Tree:** B flowering type.

Yamagata.—Guatemalan with a weight of 450 g. **Origin:** Orig. in Hawaii. **Fruit:** Pulp moisture 65%, 23% oil, edible portion 66%, fibrous with strong nutty flavor. Tough gritty skin, fruit with curved neck. Susceptible to postharvest diseases. **Tree:** B flowering type.