Register of New Fruit and Nut Cultivars
List 46

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Crop Listings*: Almond Rootstock, Apple, Apple Rootstock, Apricot and Pubescent-Skinned Prunophora Hybrids, Apricot Rootstock, Blackberry, Blueberry, Blue Honeysuckle, Cactus Pear, Citrus, Cranberry, Currant, Elderberry, Gooseberry, Grape, Grape Rootstock, Hazelnut, Kiwifruit, Mango, Nectarine, Paw Paw, Peach, Peach Rootstock, Persian Walnut, Plum, Rambutan, Raspberry, Strawberry

ALMOND ROOTSTOCK

Thomas G. Beckman, USDA-ARS Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA

Replantpac. Compatible with almond cultivars. Described under Plum Rootstock.

APPLE

James J. Luby and David S. Bedford, Dept. of Horticultural Science, University of Minnesota, St. Paul, MN


Cauliflight. Limb mutation of Caudle with more intense bright red overcolor. Origin: Flightshott Farm, Kent, United Kingdom by S. Glover. USPP 20,942; 27 Apr. 2010.


Goldlane. Compact, columnar tree with firm and crisp yellow fruit. Origin: Inst. of Experimental Botany, Czech Republic by J. Tupy, O. Louda, and J. Zima. UEB 3138/1 x Bohemia; selected 2003. USPP 21,413; 26 Oct. 2010. Fruit: best quality after 3 mo common storage; 6.0 cm height x 7.6 cm diam.; globose to obloid; weak ribbing; crown at calyx end; skin yellow with no overcolor; no bloom or greasiness; flesh very firm, crisp, fine texture with rich flavor and medium aroma; stores for 6 mo in ambient refrigerated storage. Tree: columnar habit; spur bearing; Rvi6 (Vf) resistance to apple scab.


KAR 4. Early maturing red apple with apple scab resistance. Origin: Agriculture & Agri-Food Canada Kentville Research Station, Kentville, Nova Scotia by C.G. Embree. PaulaRed x Novamace; crossed 1978; tested as S47-20-37. Canada PBR 3,809; 9 Mar. 2010. Fruit: small to medium, 5.9 cm axial diam. x 7.4 cm transverse diam.; obloid; absent or weak ribbing; moderate crowning at calyx end; skin moderately glaucous with absent or very weak greasiness, yellow green ground color, moderate area of solid red flush with weakly defined narrow stripes of red overcolor, medium area of russet around stalk attachment, absent or small area of russet on cheeks and around eye basin, medium number of medium sized lenticels; flesh medium firm, cream color, moderate browning. Tree: strong vigor; ramified, upright habit, bearing on spurs and long shoots; resistant to apple scab (Venturia inaequalis) and moderately resistant to powder mildew (Podosphaera leucotricha).


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Scotia by C.G. Embree. NJ32 x NJ191456; crossed 1963; tested as S23-06-52. Canada PBR 3,808; 9 Mar. 2010. Fruit: medium, 6.8 cm axial diam. x 8 cm transverse diam.; globose; moderate ribbing; absent or weak crowning at calyx end; skin moderately glaucous with absent or very weak greasiness, yellow ground color, very large area of solid dark purple red flush with weakly defined narrow stripes of dark purple red overcolor, medium area of russet around stalk attachment, many medium sized lenticels; flesh firm, white with pinkish striping, browns slowly. Tree: strong vigor; ramified, spreading habit, bearing on spurs and long shoots; susceptible to apple scab.


Moonlight. A late-maturing cultivar with columnar habit, medium-sized, yellow-green fruits having good storage quality and Rvi6 (Vf) resistance to apple scab. Origin: Inst. of Experimental Botany, Czech Republic by J. Tupy, O. Louda, and J. Zima. Goldstar x Telemon; selected 2002. USPP 21,511; 23 Nov. 2010. Fruit: size average 7.0 cm axial diam. x 7.8 cm transverse diam.; globose conical to conical shape; skin yellow-green to yellow with a partial red to orange blush; flesh yellow, firm, crisp and juicy with a good sweet/sour balance and very good eating quality. Tree: columnar habit; Rvi6 (Vf) resistance to apple scab and tolerance to powdery mildew.


New York 1. Attractive red fruits that are sweet, juicy and have a crisp texture, ripen early mid-season and store 100–150 d. Origin: Cornell University/New York State Agric. Exp. Stat. Geneva, NY, by S.K. Brown and K. Maloney. Honeycrisp x NY752; tested as NY 99804-001. USPP 22,228; 8 Nov. 2011. Fruit: 7.3 cm axial diam. x 6.3 cm transverse diam.; medium- to long-conical; flesh similar to Honeycrisp in sweetness, juiciness and crisp texture, but firmer and not prone to bitter pit or soft scald. Tree: small to medium size with low vigor and upright habit; precocious, annual bearing on spurs.

New York 2. Excellent fruit quality at harvest and after cold storage and precocious bearing. Origin: Cornell University/New York State Agric. Exp. Stat., Geneva, NY, by S.K. Brown and K. Maloney. Braeburn x Autumn Crisp; tested as NY92609-463. USPP 22,207; 25 Oct. 2011. Fruit: 210 g, 8.2 cm transverse diam. x 7.2 cm axial diam.; globose and symmetrical, medium crowning at calyx end, calyx partially closed; skin ground color yellow, 80% red blush overcolor with scant bloom; ripens mid-late season; flesh white, firm, crisp, juicy, slightly coarse; tart and pleasant mild flavor; stores for at least 3 mo in common storage with no disorders. Tree: medium vigor, spreading, spur bearing habit, mid-season bloom, annual cropping and very precocious; moderately susceptible to powdery mildew.

Odysseus. Produces high quality fruit with excellent fruit quality, particularly high nutritional value and a flavor more similar to the preferred Firiki. High quality. Origin: Pomology Institute (N.A.G.RE.F.), Naoussa, Greece, by T. Sotiropoulos. Mutsu x Firiki; crossed in 2000. HortScience 46:141–142. Fruit: medium-large with axial diam. 7.5 cm x transverse diam. 7.3 cm; oblong conical; skin light green with no russetting and small, inconspicuous lenticels; flesh white, aromatic, crisp, and juicy; no bitter pit or external browning; good storage for up to 5 mo. Tree: productive; almost no preharvest fruit drop; thinning necessary to avoid biennial bearing; mainly spur-bearing.


PrenA153. Blush-yellow fruit with excellent flavor and texture. Origin: Hawkes Bay, New Zealand by A. White. Tenroy Gala x Braeburn. USPP 21,936; 31 May 2011. Fruit: 200 g, 8.5 cm diam. x 9 cm height; globose conical; lacks ribbing, crown at calyx end; closed calyx; skin with yellow ground color and 20% yellow-orange blush overcolor; flesh white, juicy with fine texture, weak aroma. Tree: vigorous; semi-upright; late-season blooming.

Qinyang. Early ripening with high fruit quality. Origin: Northwest A&F University, Yangling, Shaanxi, People’s Republic of China by H. Gao, Z. Zhao, Y. Lu, Y. Wan, L. Wang, and J. Yuan. Royal Gala x O.P.; selected 1998; tested as 12-9-53; HortScience 46:660–661. Fruit: medium, axial diam. 6.7 cm x transverse 7.9 cm; globose; skin with red stripes to full-red over a greenish-yellow ground color; white, conspicuous, lenticels; slight russetting in stem cavity; flesh slightly yellow, crisp, juicy, and medium firm; aromatic sweet, slightly tart flavor. Tree: medium vigor; conical canopy, upright spreading habit; leaves and fruits have higher resistance to ring moth (Lithocolletis ringonella), leafspot (Alternaria mali), and powdery mildew than Royal Gala.


September Sentinel. Columnar tree with dark-pink flower petals and red blushed fruit ripening in mid season. Origin: Agriculture and Agri-Food Canada, Pacific Agri-Food Research Centre, Summerland, BC by D.W. Lane. 8H-09-01 x Coop 27; selected 1989; tested as 11W-61-23. Canada PBR 3,765; 15 Feb. 2010. Fruit: medium size; conic with absent or weak ribbing and moderate crowning at calyx end; skin moderately glaucous with absent or very weak greasiness; yellow-green ground color with a large area of solid red flush and weakly defined medium width stripes of medium-red overcolor; absent or small area of russet around stalk attachment; absent or small area of russet on cheeks and around eye basin; few to medium number of medium sized lenticels; flesh firm, cream color Tree: medium vigor with columnar habit; spur-bearing.

Smaragd. Columnar, late season, with green fruit. Origin: Faculty of Agriculture, University of Novi Sad, Serbia by V. Ognjanov. Granny Smith x McIntosh Wijcik; crossed 1993; selected 1999; HortScience 46:952–954. Fruit: medium-large with transverse diam. 7.5 cm; flat-globose; skin 100% uniform green with no overcolor; small, usually inconspicuous, lenticels; no russet; flesh is fine, crisp,
juicy and white; mildly acidic, pleasant flavor and fragrant aroma; prone to superficial scald; less susceptible to bitter pit than Granny Smith. **Tree:** low vigor; erect, dense, and compact columnar habit; suitable as a potted tree; precocious; spurbearing; annual cropping; late flowering and ripening.

**WA 2.** Attractive, firm, crisp and juicy bi-colored late- mid-season apple with excellent storage potential. **Origin:** Washington State University Tree Fruit Research and Extension Center, Wenatchee, WA by B. Barritt, B. Konishi, and K. Evans. Splendour x Coop 15; crossed 1994 by S. Mehlenbacher (Oregen State University); selected 2001. USPP 21,710; 15 Feb. 2011. HortScience 45:668–669. **Fruit:** medium size, 7.7 cm transverse diam.; round-conic; skin with overcolor 70–90% orange – red to pinkish-red blush with no stripe over a yellow ground color; lenticels large and very conspicuous; stem basin russet and scar skin observed; flesh yellow-white, firm, crisp and melting; mildly acid with excellent sugar balance and mild, apple-like aroma; rarely exhibits russet, bitter pit, or sunburn **Tree:** upright and spreading with moderate vigor and spur type; very productive and can exhibit alternate bearing; moderate susceptibility to powdery mildew and fire blight (*Erwinia amylovora*).

**WA 5.** Attractive, early mid-season apple with excellent texture. **Origin:** Washington State University Tree Fruit Research and Extension Center, Wenatchee, WA by B. Barritt, B. Konishi, and K. Evans. Splendour x Coop 15; crossed 1994 by S. Mehlenbacher (Oregen State University); selected 2001. USPP 21,710; 15 Feb. 2011. HortScience 45:668–669. **Fruit:** medium size, 7.7 cm transverse diam.; round conical; skin glaucous at harvest with bright orange-red stripe over yellow background; no russet; inconspicuous lenticels; flesh firmer, crispier and juicer than Gala with a higher acid/sugar ratio and mild aroma. **Tree:** open-vase type, upright and spreading with compact habit and light to moderate spur development; very precocious; tendency to alternate bearing; moderate susceptibility to powdery mildew and DNA marker data suggest it carries *Rvi6 (Vf)* gene for resistance to apple scab.

### APPLE ROOTSTOCK

Gennaro Fazio, USDA-ARS Plant Genetic Resources, Geneva, NY
Terrence L. Robinson, Cornell University, Geneva, NY


**Geneva® G.222.** See G.222.

**Geneva® G.890.** See G.890.

**Geneva® G.969.** See G.969.

**G.210 (Geneva® G.210).** A clonal apple rootstock. **Origin:** New York State Agricultural Experiment Station and the USDA-ARS, Geneva, NY, by J.C. Cummins, H.S. Aldwinckle, T.L. Robinson and G. Fazio. Ottawa 3 (*Malus x domestica*) x Robusta 5 (*M. x robusta*); crossed 1975; tested as CG.6210; introd. 2010. USPP applied for. **Plant:** propagated by stool bed layering, un budded stoles have preserved buds; have recurved, pointed wavy leaves; stool beds have similar productivity to M.9.; stems have few spines; root systems express fine root trait. **Rootstock performance:** young grafted tree needs support; dwarving, 30–35% of seedling; precocious; productive; similar vigor and precocity to M.9; Nic 29, and M.26, but more productive; good cold hardiness; resistant to fire blight, Phytophthora root rot, and woolly apple aphid.

**G.222 (Geneva® G.222).** A clonal apple rootstock. **Origin:** New York State Agricultural Experiment Station and the USDA-ARS, Geneva, NY, by J.C. Cummins, H.S. Aldwinckle, T.L. Robinson and G. Fazio. Robusta 5 (*M. x robusta*) x Ottawa 3 (*M. x domestica*); crossed 1975; tested as CG.4222, CG.5522 and CG.5520; introd. 2011. USPP applied for. **Plant:** propagated by stool bed layering, un budded stoles have preserved buds; have recurved, pointed wavy leaves; stool beds have similar productivity to M.9.; stems have few spines; root systems express fine root trait. **Rootstock performance:** young grafted tree needs support; dwarving, 45–55% of seedling; productive; similar vigor to Malling 7 but more precocious and productive; good cold hardiness; resistant to fire blight (*Erwinia amylovora*), Phytophthora root rot (*Phytophthora parasitica*), and woolly apple aphid (*Eriosoma lanigerum*).
**ASFCOT0405.** Orange-fleshed apricot with mildly acidic and sweet taste and having a very long shelf life. *Origin:* Elne, France, by A. Maillard, and L. Maillard. Robada x Toyaco (Tomcot®); selected 2007; tested as 03.16.01 AB. USPP 21,137; 6 Jul. 2010. **Fruit:** round, slightly oblate; 80 g; freestone; fibers generally not observed; flesh orange; skin blush 40% to 60% of surface; texture fine and firm; aroma pronounced; eating quality very good, sweet; kernel bitter. **Tree:** vigorous; semi-spreading to semi-upright; production very good and bearing regular; flowers said to be partially self-compatible; unknown reaction to PPV.

**ASFCOT0406.** Orange-fleshed apricot with mildly acidic and sweet taste and having a very long shelf life. *Origin:* Elne, France, by A. Maillard, and L. Maillard. Couloumine x O.P.; selected 2007; tested as 02.01.121 AB. USPP 21,167; 6 Jul. 2010. **Fruit:** round, slightly oblate; 65–75 g; freestone; fibers generally not observed; flesh orange; skin blush 50% to 60% of surface; texture fine and firm; aroma pronounced; eating quality very good, sweet; kernel bitter. **Tree:** vigorous compared to other commercial apricots; semi-spreading to semi-upright; production very good and bearing regular; flowers self-compatible; unknown reaction to PPV.

**ASFCOT0409.** Orange-fleshed apricot with mildly acidic and sweet taste and having a very long shelf life. *Origin:* Elne, France, by A. Maillard, and L. Maillard. Robada x Toyaco (Tomcot®); selected 2007; tested as 03.16.43 AB. USPP 21,135; 6 Jul. 2010. **Fruit:** round, slightly oblong toward base and apex; 65–75 g; freestone; fibers generally not observed; flesh orange, skin blush 30% to 50% of surface; texture fine and firm; aroma pronounced; eating quality very good, sweet; kernel bitter. **Tree:** vigorous and medium-sized compared to other commercial apricots; semi-upright; production very good; bearing regular; flowers partially self-compatible; unknown reaction to PPV.

**Bella Sun.** Vigorous and upright F₁ plumcot bearing yellow-fleshed fruit with good flavor and eating quality. *Origin:* Modesto, CA, by G.N. Zaiger, L.M. Gardner, and G.G. Zaiger. 35EA376 x Poppy; selected 2003. USPP 21,817; 29 Mar. 2011. **Fruit:** globose, slightly flattened at base and apex; 88 g; freestone; fibers moderate, not noticeable or felt; flesh yellow-orange; texture firm; aroma moderate to rich; eating quality very good. **Tree:** vigorous; growth habit upright; production good; flowers self-compatible.

**Leah Cot.** Orange-skinned interspecific with high Brix, heavy aroma and apricot-textured flesh. *Origin:* Modesto, CA, by G.N. Zaiger, L.M. Gardner, and G.G. Zaiger. selected 2003. USPP 21,863; 12 Apr. 2011. **Fruit:** slightly elongated; 91 g; freestone; fibers few, small and tender; texture firm and smooth; aroma slight; eating quality very good. **Tree:** vigorous; upright; productive and regular bearing; flowers self-incompatible; chilling requirement 650 h at or below 7 °C.

**Sweetcot II.** Early season red-skinned F₁ plumcot with melting orange-yellow flesh and very good eating quality. *Origin:* Le Grand, CA, by L.G. Bradford. selected 2002. USPP 21,937; 31 May 2011. **Fruit:** globose; 110 g; freestone; fibers abundant, fine and tender; medium firmness with melting texture; aroma slight; eating quality very good. **Tree:** vigor moderate; spreading and dense; productivity moderate with adequate pollinator; flowers self-incompatible.

**APRICOT ROOTSTOCK**

**Thomas G. Beckman, USDA-ARS Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA**

**Replantpac.** Compatible with some apricot cultivars. Described under Plum Rootstock.

**BLACKBERRY**

**John R. Clark and Sandra M. Sleezer, Department of Horticulture, University of Arkansas, Fayetteville, AR**

**Chad E. Finn, USDA-ARS, Horticultural Crops Research Laboratory, Corvallis, OR**

**Asterina.** See Fruloché.

**DrisBlackTwo.** A spineless semi-upright blackberry. *Origin:* Driscoll Strawberry Associates, Inc., Watsonville, CA, by G.R. Sills, S.B. Moyles, and A.M. Pabon. BH936-6 x Driscoll Cowles; selected 2004; patented 2011; USPP 22,002; 5 July 2011. **Fruit:** medium; ovate; SS 11.6%; late to very late harvest season. **Plant:** semi-upright, thornless; high fruit productivity; partially self-fruitful.

**Fruloché (Asterina®).** Thornless upright blackberry. *Origin:* Meiosis, Ltd. by P. Hauenstein in Switzerland. Loch Ness x Chester Thornless. **Fruit:** very large, shiny; excellent aroma, no sour taste when not fully ripe; ripens from mid-July with a very long cropping period; suitable for pick-your-own marketing, and home gardens. **Plant:** upright; thornless; very healthy; no particular susceptibility to pests or diseases.

**HJ-6.** Thorny, large, high-quality, trailing blackberry. *Origin:* Plant Sciences, Inc. by H.A. Johnson in Santa Cruz, Co., CA. Eaton x Obsidian; crossed 2005; selected 2007; tested as Z26.6; introd. 2010. **Fruit:** consistently large with good flavor, high production and maturity for fresh shipment in June and some production through July; flavor and color good. **Plant:** strong, trailing with canes large in diameter and noticeably red; leaves and leaflets large; shows no susceptibility to rusts or downy or powdery mildews in Santa Cruz Co.

**Nettleton Creamy White.** A thorny upright white blackberry. *Origin:* Corona, CA by S.E. Nettleton and J.R. Nettleton. Spontaneous mutation of wild blackberry. USPP 20,234; 25 Aug. 2009. **Fruit:** medium, 1.6 to 1.9 cm diameter; white; blooms end of May beginning of June in southern Illinois; starts ripening at the end of the latter half of June in southern Illinois. **Plant:** upright; thorny; bright green canes and leaves.

**Onyx.** Thorny trailing blackberry with firm, uniformly shaped and sized high quality fruit that ripen in the late trailing blackberry season and that are suited especially for the fresh market. *Origin:* USDA-ARS, Corvallis, OR, by C.E. Finn, B.C. Strik, B.M. Yorgey, and R.R. Martin. OSC 1466 x ORUS 1117-11; crossed 1994; selected 1997; tested as ORUS 1523-4; introd. 2011. USPP 22,358; 20 Dec. 2011. **Fruit:** medium, 6.1 g; uniform, conic; dark black; attractive; glossy; very firm; good texture comparable to Marion; excellent flavor; SS 12.7%; pH 3.5; titratable acidity 11.1 g L⁻¹ as citric; ships well in wholesale fresh market chain; ripens later than Marion in late season for trailing types. **Plant:** trailing; thorny; vigorous; medium yield, comparable to Marion; medium-long fruiting laterals; machine harvests easily; not particularly susceptible to septoria leaf spot (*Mycosphaerella rubi*) and purple blotch (*Septocya ruborum*); hardiness not well tested but survived –8 °C in Oregon when Marion was severely damaged.
**BLUE HONEYSUCKLE**

**Kim E. Hummer, USDA ARS National Clonal Germplasm Repository, Corvallis, OR**

**Robert H. Bors, Department of Plant Sciences, University of Saskatchewan, Saskatoon, Canada**

Borealis. Great tasting, large-fruited blue honeysuckle. **Origin:** University of Saskatchewan, by R.H. Bors. Kiev#8 (Blue Velvet™) x Tomichka (Blue Belle™); tested as 9-94; introd. 2007. Canada PBR applied for. **Fruit:** twice as large as other genotypes available in Canada; early to mid-season ripening; slightly flattened with a cylindrical-boxy shape; wider than most Russian cultivars; flavor sweet-tart and highly rated; delicate and soft; ripe berries can persist on bushes for a month or longer. **Plant:** 1.5 m tall; spreading but dense canopy that hides fruit from birds; not suited to machine harvesting; recommended for home gardeners; resistant to powdery and downy mildew, and sunscald; named for its northern climate adaptation.

**Tundra.** Flavorful, large-fruited, non-bleeding, blue honeysuckle. **Origin:** University of Saskatchewan, by R.H. Bors. Kiev#8 (Blue Velvet™) x Tomichka (Blue Belle™); tested as 9-84; introd. 2007. Canada PBR applied for. **Fruit:** about 50% larger than genotypes available in Canada; early to mid-season ripening but can hang for several weeks after ripening; yield above average; firm; wider than most Russian cultivars; recommended for commercial production; flavor sweet-tangy; non-bleeding stem end allows for individually quick-frozen processing; more delicate and larger than sibling Borealis. **Plant:** to 1.5 m tall; open-spreading canopy; resistant to powdery, downy mildew, and sunscald; northern climate adapted.

**BLUEBERRY**

**Mark K. Ehlenfeldt, USDA-ARS, Genetic Improvement of Fruits and Vegetables Laboratory, Beltsville, MD**

A-257 (Kā-Bluey™). A mid-early season blueberry with distinct flavor suitable for home gardens. **Origin:** Univ. of Arkansas, by J.R. Clark, J.N. Moore, and A.D. Draper. US 73 x G-526; selected 1988; tested as A-257; introd. 2005. **Fruit:** med. to med.-small, 1.4 g; medium-dark; flavor very distinct, often described as “peach like”; good scar; crisp texture; ripens 27 May in Clarksville, AR; **Plant:** selected in low organic matter, non-amended soil and has good vigor in mineral soils; upright to slightly spreading growth habit; early blooming, 3 Mar. early bloom and 50% bloom 4 Apr. (Blucrop 11 Apr.); believed to be self-pollinating; chilling requirement not fully determined but estimated to be 500–800 h; no diseases observed in Arkansas.

Augusta. Late-season northern highbush blueberry; not to be confused with *V. angustifolium* cultivar of same name released in 1975. **Origin:** Research Institute for Fruit Growing Pitești, Romania by P. Mladin. Berkeley x Blu-ray; crossed 1982; selected 1995; tested as 82-2-55/3; introd. 1999. **Fruit:** large, light-blue; round-flattened shape; good dessert quality, medium firmness; small, dry pedicel scar. **Plant:** vigorous; upright; high-yielding; resistant to anthracnose (*Gloeosporium fructigenum*) and fire blight (*Erwinia amylovora*); moderately resistant to *Phomopsis* spp. and *Septoria albopectinata*.

Azur. A medium- to late-ripening northern highbush blueberry. **Origin:** Research Institute for Fruit Growing Pitești, Romania by P. Mladin. Berkeley x Blu-ray; crossed 1983; selected 1996; tested as 83-2-4/2; introd. 1998. **Fruit:** large, light-blue, good flavor and shelf-life. **Plant:** vigorous, upright, productive, resistant to anthracnose, fire blight and *Phomopsis* spp.; moderately resistant to *S. albopectinata*.

Blue Bayou. An early-mid season ripening highbush blueberry with a potential second crop late in the summer. **Origin:** New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. Reka x Island Blue; crossed 1990; selected 1998; tested as F126; introd. 2007; USPP 21,721 (as F126), 22 Feb. 2011; NZ PVR 3001; 24 June 2011. **Fruit:** small, 1.3 g; round; sweet; light-blue with heavy bloom; good firmness. **Plant:** good vigor; upright growth; medium- to low-chill; early to mid-season flowering and cropping; medium to high yields; suitable for machine harvesting.

Blue Dawn™. See Takahe.

Blue Magic™. See Whitu.

Blue Moon. A highbush blueberry with large, firm fruit, suitable for outdoor and indoor production. **Origin:** New Zealand Institute for Plant and Food Research, Ltd, Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. Nui x B7-8-1; crossed 1988; selected 1996; tested as RH34 introd. 2007; USPP 21,736, 1 Mar. 2011; NZ PVR 3000; 24 June 2011. **Fruit:** large, 2.8 to 3.5 g; oblate; light blue; excellent firmness and flavor even under extreme heat. **Plant:** medium vigor; semi-upright growth; medium- to low-chill; flowering and production contemporary to Nui; medium production; appears suitable for tunnel and glasshouse production as well as outdoors.

Compact. A mid-season ripening northern highbush blueberry. **Origin:** Research Institute for Fruit Growing Pitești, Romania, by P. Mladin. Spartan O.P.; crossed 1989; selected 1996; tested as 89-3/19; introd. 2002. **Fruit:** large to medium; blue; flattened shape; medium pedicel scar; medium firm; compact clusters. **Plant:** medium vigor; upright; high yielding; resistant to anthracnose and fire blight; moderately resistant to *Phomopsis* spp. and *S. albopectinata*.

Delicia. A mid-season ripening northern highbush blueberry with excellent flavor. **Origin:** Research Institute for Fruit Growing by P. Mladin. Spartan O.P.; crossed 1988; selected 1996; tested as 88-4/57; introduced 2001. **Fruit:** large; light-blue; very flavorful and firm; high in acids; small, dry pedicel scar. **Plant:** medium vigor; spreading; precocious; high yielding; resistant to anthracnose and fire blight; moderately resistant to *Phomopsis* spp. and *S. albopectinata*.

Dolce Blue. A rabbiteye blueberry with early to mid-season production. **Origin:** New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. Centurion x Rahi; crossed 1996; tested as D122; introduced 2011; NZ PVR applied for. **Fruit:** medium to small, 1.6 g; oblate to round; attractive bloom; good firmness; sweet with little acidity. **Plant:** semi-upright; medium vigor; medium yield; medium to abundant leafing; flowers and crops with Rahi and Sky Blue; fruiting clusters are generally medium sized and loosely arranged on long fruiting bunches; propagation by softwood cuttings.

Earlbirdblue. A garden and landscape southern highbush blueberry suited to Texas conditions. **Origin:** USDA-ARS, Poplarville, MS, USDA-ARS Beltsville, MD, and Stephen F. Austin State University, Nacadoches, TX by S. Stringer, A. Draper, J. Spiers, and D. Creech. G 144 x US 75; crossed 1977; selected 1979; tested as MS 108; introd. 2011. **Fruit:** medium; good color and flavor when allowed to hang for several days after turning blue; skin may tear at the base of the pedicel, making this cultivar unsuitable for shipping. **Plant:** moderately vigorous with a relatively short stature, 1.5–2 m; spreading growth habit; attractive, dense, green foliage; consistent productivity; easy to prune and easily integrated into the home landscape; ripens 4–8 weeks earlier than many rabbiteye blueberry cultivars; flowers develop and bloom sufficiently late to avoid most frost damage; chilling requirement ~500 h; propagation from softwood or hardwood cuttings.

FL 01-173 (Meadowlark™). Early season southern highbush blueberry with upright plant habit. **Origin:** Univ. of Florida, by
FRUIT large; medium-blue; good picking scar and firmness; flavor mild; very open clusters with long pedicel and peduncles; suitable for mechanical harvest for fresh market. **Plant:** vigorous; very upright growth habit; early spring leafing; propagates readily from softwood; cross-pollination required; chilling requirement ~300 h.

**FL 02-40 (Kestrel™).** Very-low-chill, early season southern highbush blueberry. **Origin:** Univ. of Florida, by P.M. Lyrene. FL 95-54 x FL 97-125; crossed 1999; selected 2002; tested as FL 02-40;intro. 2009; USPP 21,719; 22 Feb. 2011. **Fruit:** large; light-blue; aromatic when mature; good firmness and scar. **Plant:** vigorous; upright-growth; prolific early leafing; propagates readily from softwood; cross-pollination required; chilling requirement 150–200 h.

**FL 96-43 (Flicker™).** Vigorous, early season southern highbush blueberry. **Origin:** Univ. of Florida, by P.M. Lyrene. FL 93-51 x FL 93-46; crossed 1993; selected 1996; tested as FL 96-43; intro. 2009; USPP 21,554; 7 Dec. 2004. **Fruit:** large, light-blue, in loose clusters; excellent small picking scar; high firmness; flavor good; fruit holds well on the bush. **Plant:** very vigorous; upright-growth; good field survival; propagates readily from softwood cuttings; cross-pollination required; chilling requirement ~200 h.

**Flicker™,** See FL 96-43.

**Hortblue Demure.** A *V. simulatum* selection, suitable for the ornamental home-garden market. **Origin:** New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. Open-pollinated seedling from *V. simulatum*; selected 1997; tested as D104; intro. 2005. **Fruit:** very small; medium bloom and scar; flavor good; fruit has a high concentration of anthocyanins; **Plant:** bushy; low chilling requirement; flowers 2–3 times per year August to April in New Zealand; main crop is in December in New Zealand and a second crop generally occurs late in the summer; similar to Hortblue Onyx, but a smaller and more compact bush.

**Hortblue Onyx (Smoothie™).** A *V. simulatum* selection suitable for the ornamental market. **Origin:** New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. **V. simulatum** O.P.; selected 1998; tested as D105; introd. 2003; NZ PVR 2727; 3 Sept. 2008. **Fruit:** very small; medium bloom and scar; flavor good; fruit has a high concentration of anthocyanins; **Plant:** bushy; low chilling requirement; flowers 2–3 times per year, August to April in Waikato, New Zealand; first flowering is about a month earlier than Hortblue Petite, and contemporary with Northland and Hortblue Poppins; the main crop is in December in New Zealand and a second crop generally occurs late in the summer.

**Hurcon.** An early ripening northern highbush blueberry with very high fresh market quality and long storage life. **Origin:** Michigan State University by J. Hancock. G 344 x MU 6566; crossed 1991; selected 1997; tested as MSU 47; released 2010; USPP 21,777; 15 Mar. 2011. **Fruit:** moderately large; small, dry picking scar; color light-blue; excellent firmness and superior flavor, if allowed to fully ripen. **Plant:** vigorous, upright, productive; first harvest falls between ‘Duke’ and ‘Bluecrop’.

**Island Blue.** A southern highbush blueberry with early production. **Origin:** New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. 1376 x N JUUS 83; selected 1995; tested as B8-2-25; introd. 2002; NZ PVR 2726; 3 Sept. 2008. **Fruit:** medium, 1.4 to 1.8 g; good color, bloom, firmness, stem scar and flavor; soluble solids and titratable acidity are comparable to Misty. **Plant:** vigorous upright growth, with a good balance between shoots and fruit; early flowering, contemporary to O’Neal; no noticeable susceptibility to cold damage; early production contemporary to Misty, Marimba and O’Neal; high yields; suitable for fresh and processed market.

**Ka-Bluey™,** See A-257.

**Kestrel™,** See FL 02-40.

**Kilaeua.** An ‘ohelo berry, (*V. reticulatum*) selected for ornamental and edible berry production **Origin:** USDA-ARS, Hilo, HI by F. Zee. From native collected seed; selected 2006; tested as N06-7; intro. 2008. **Fruit:** medium ~1.2 g; round, orange to salmon, frequently with orange spots; relatively low sugar, ~5.5% Brix with acidity similar to Bluecrop. **Plant:** up to 50 cm; more compact and spreading growth than Red Button ‘ohelo; responds well to pruning and readily trained into a compact symmetrical canopy; small, light-green leaves ~17 x 13 mm; short internodes, ~3 mm; in cool environments, young buds and shoots are bright crimson; multiple flower buds are produced at leaf axis; crimson calyx and white-fringed pink corolla; propagation by tissue culture or softwood cuttings.

**Lax.** An early to mid-season ripening northern highbush blueberry. **Origin:** Research Institute for Fruit Growing Pitest, Romania by P. Mladin. Spartan O.P.; crossed 1988; selected 1998; tested as 88-3/7; introd. 2002. **Fruit:** medium; blue; round; moderate flavor; high in vitamin C; loose cluster is easy to pick. **Plant:** vigorous; upright habit; high yielding; compact ripening, needing only 2–3 picks; resistant to *Phomopsis* spp., anthracnose, and fire blight; moderately resistant to *S. albopunctata*.

**Meadowlark™,** See FL 01-173.

**Ono (Tasty Blue™).** A rabbiteye blueberry with a light-green, dense canopy. **Origin:** New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. Premier O.P.; selected 1989; tested as 4-25; introd. 1996; NZ PVR 1136; 22 Aug. 1996. **Fruit:** medium-large; smooth texture; minimal small seeds; medium-flat calyx; medium pedicel scar; fruiting season is medium to late; medium yield. **Plants:** upright; vigorous; dense canopy of light-green foliage.

**Pearl.** An early ripening southern highbush blueberry with excellent fruit quality. **Origin:** USDA-ARS Poplarville, MS, by S.J. Stringer, J.M. Spiers, D.A. Marshall, and A.D. Draper. Bluecrisp x Magnolia; crossed 1997; selected 1999; tested as MS 812; introd. 2002. **Fruit:** large; early ripening; light blue; firm; flavor excellent; small picking scars. **Plant:** vigorous; productive; dark green foliage; moderately spreading growth habit and narrow crowns; excellent survival in southern Mississippi; chilling requirement ~400–450 h; propagation by softwood or hardwood cuttings.

**Prod.** A midseason northern highbush blueberry. **Origin:** Research Institute for Fruit Growing Pitest, Romania by P. Mladin. Patriot O.P.; crossed 1989; selected 1992; tested as E-4/45; introd. 2008. **Fruit:** medium; light-blue; flattened shape; balanced flavor and acidity; small, dry pedicel scar; firm, good postharvest shelf life. **Plant:** medium vigor; large; spreading; heavy yielding; resistant to *Phomopsis* spp., anthracnose, and fire blight; moderately resistant to *S. albopunctata*.

**Razz.** A midseason northern highbush blueberry with raspberry overtones for culinary, pick-your-own, and home use. **Origin:** USDA-ARS, Chatsworth, NJ, by F.V. Coville and M.K. Ehlenfeldt. GM-37 x *S. albopunctata*. From native collected seed; selected 2006; tested as N06-7; intro. 2008. **Fruit:** medium; blue; round; raspberry overtones for culinary, pick-your-own, and home use. **Plant:** vigorous; upright, willow-like; susceptible to cold damage; high yields; suitable for fresh and processed market.
anthracnose; very good resistance to mummy berry blight (Monilinia vaccini-corymbosi) and, average resistance to fruit infection. 

Red Button. An ‘ohelo berry (V. reticulatum) selected for ornamental traits and prolific berry production. Origin: USDA-ARS, Hilo, HI by F. Zee. From native collected seed; selected 2006; tested as N06-9; introd. 2008. Fruit: medium, ~13 x 11 mm; round; light orange-yellow with red speckles; low sugars, ~5% Brix with acidity similar to Bluecrop. Plant: up to 50 cm; more upright growth than Kilauea ‘ohelo; responds well to pruning and training, and can be shaped into a compact symmetrical canopy; ovate leaflets ~25 x 21 mm; internodes ~3 mm; emerging buds are bright crimson, and expand into shiny, leathery, green leaves with a red margin; multiple flower buds emerge from the leaf axils and have red-purple calyx tips with a white margin, dark red fused sepals from budding through flowering; propagation by tissue culture or softwood. 


Sky Blue. A rabbiteye blueberry with mid-season production. Origin: New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. Centurion x Rahi; crossed 1996; selected 2000; tested as F110; introd. 2007; 22 Feb. 2011; NZ PVR 3003; 24 June 2011. Fruit: large; oblate; attractive bloom; good firmness and excellent flavor. Plant: medium stature; semi-upright habit; flowering and cropping contemporary with Rahi; medium to high yield; no noticeable susceptibility to cold damage or main fungal diseases; propagation by softwood. 

Smoothie™, See Hortblue Onyx. 

Southern Splendour. An early season southern highbush blueberry with highly desirable flavor, very good firmness, and a shortened fruit development period. Origin: University of Georgia, College of Agricultural and Environmental Sciences and Agricultural Experiment Station by D.S. NeSmith. Reveille x Palmetto; crossed 1997; selected 2001; tested as TH-664; introd. 2010. USPP applied for. Fruit: medium- to medium-large, 1.5–1.9 g; medium to light-blue; small, dry picking scar; excellent flavor and firmness; short fruit development period; suitable for machine harvest. Plant: vigorous; semi-upright habit with a narrow crown; should be managed to prevent overcropping and to maintain fruit size; chill requirement ~450–500 h; propagates easily by softwood cuttings. 

Summer Sunset™, See T-885. 

Sunset Blue. A highbush blueberry with high yield, early-mid season production. Origin: New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel. Reka x B7-8-1; crossed 1988; selected 1996; tested as RH11; introd. 2007; USPP 21,761, 8 Mar. 2011; NZ PVR 3002; 24 June 2011. Fruit: medium to large, ~2.2 g; oblate; light-blue with heavy bloom; good firmness. Plant: good vigor; upright growth; medium to low chilling requirement; productive; early to mid-season flowering and cropping, intermediate to O’Neal and Reka; plant has shown tolerance to foliar rust infection (Naohide-myces vaccini). 

Sweetheart. An early season highbush blueberry with concentrated ripening. Origin: USDA-ARS, Chatsworth, NJ by M.K. Ehlenfeldt. TH 275 x G 567; crossed 1996; selected 1999; tested as ARS 99-88, introd. 2010. Fruit: medium- to medium-large, ~1.6 g; early; concentrated ripening; very good firmness; superior flavor that is retained in storage. Plant: vigorous upright bush; good productivity; cold hardiness and flowering time similar to Bluecrop; flower buds round and fist-like similar to Ozarkblue; flowers and fruits to a small degree on new growth in mild autumns; should be managed to prevent overcropping and to maintain fruit size. 

T-885 (Summer Sunset™). Complex hexaploid blueberry hybrid useful as an attractive ornamental while also producing edible fruit. Origin: University of Georgia Agricultural Experiment Station and USDA-ARS, Chatsworth, NJ by D.S. NeSmith and M.K. Ehlenfeldt. Climax x US 1056; crossed 2002; selected 2005; tested as T-885, introd. 2010. USPP applied for. Fruit: medium, 14–16 mm; produces an abundance of multi-colored berries as they ripen, progressing from yellow-green, to orange-red, to red, to red-purple, to black when fully ripe; slightly tart when first ripe, gradually sweetening as they hang; ripens contemporary with early-ripening rabbiteye cultivars. Plant: vigorous; reaching 1.2 m tall x ~0.6 m wide; attractive, green, non-glaucous foliage; moderate crop; chilling requirement ~500–550 h; USDA hardiness zones 6b–9a; propagates easily by softwood cuttings. 


Tasty Blue™, See Ono. 

Velluto Blue. A rabbiteye blueberry with early to mid-season production. Origin: New Zealand Institute for Plant and Food Research, Ltd., Ruakura Research Centre, Hamilton, New Zealand, by N. Patel and J. Scalzo. Maru x Briteluce; selected 2000; tested as F128; introd. 2011; NZ PVR applied for. Fruit: large; oblate; attractive bloom; good firmness; good balance between acidity and sugar; little grittiness. Plant: upright habit; vigorous; flowering and cropping contemporary with Rahi and Sky Blue; high yield; no noticeable susceptibility to cold damage and main fungal diseases; propagation by softwood cuttings. 


**CACTUS PEAR**

Peter Felker, D’Arrigo Bros. Co. of California, Salinas, CA

DAR 1-12-19. *Opuntia ficus indica* with red fruit for fresh consumption. **Origin:** D’Arrigo Bros. Co., of California, Salinas, CA by P. Felker and R.A. Bunch. Parents were spineless red- and spiny green-fruited cultivars vaguely described in the patent. USPP 21,760; 8 Mar. 2011. **Fruit:** peel red; flesh reddish-pink; pulp firmness high, 1.5 kg/cm²; Brix high, 14.8°; pulp ratio high, 59%; fruit size small, 125 g. **Plant:** cladodes narrow, obovate; occasionally 7 mm long spines occur on the margins and flat surfaces of the cladodes; in Salinas Valley, CA, fruits ripen September–March.

DAR 1-21-27. *O. ficus indica* with purple fruit for fresh consumption. **Origin:** D’Arrigo Bros. Co., of California, Salinas, CA by P. Felker and R.A. Bunch. Parents were spineless purple- and green-fruited cultivars vaguely described in the patent. USPP 21,834; 5 Apr. 2011. **Fruit:** peel purple; flesh purple with a whitish center, distinct from other purple-fruited cultivars; pulp firmness high; Brix; high, 1.4 kg; Brix moderately high, 13.3°; pulp ratio high, 55%; fruit size moderate, 191 g. **Plant:** cladodes medium, elliptic; occasionally 10 mm long spines arise from the areoles; in Salinas Valley, CA, fruits ripen September–March.

DAR 1-27-24. *O. ficus indica* with orange fruit for fresh consumption. **Origin:** D’Arrigo Bros. Co., of California, Salinas, CA by P. Felker and R.A. Bunch. Parents were spiny-orange- and spineless green-fruited cultivars vaguely described in the patent. USPP 22,077; 16 Aug. 2011. **Fruit:** peel orange; flesh orange; pulp firmness high, 1.4 kg; Brix moderately high, 13.3°; pulp ratio high, 55%; fruit size moderate, 150 g. **Plant:** cladodes medium, elliptic; occasionally 10 mm long spines arise from the areoles; in Salinas Valley, CA, fruits ripen September–March.

DAR 1-29-21. *O. ficus indica* with green fruit for fresh consumption. **Origin:** D’Arrigo Bros. Co., of California, Salinas, CA by P. Felker and R.A. Bunch. Parents were spiny-green and spineless-green-fruited cultivars vaguely described in the patent. USPP 21,964; 7 Jun. 2011. **Fruit:** peel green; flesh green; pulp firmness high, 1.3 kg; Brix moderately high, 14.6°; pulp ratio low, 50%; fruit size moderate, 150 g. **Plant:** cladodes medium, elliptic; occasionally 8 mm long spines arise from the margins and flat surfaces of the cladodes; in Salinas Valley, CA, fruits ripen September–March.

**CRANBERRY**

Nicholi Vorsa, Department of Plant Biology and Pathology, Rutgers University, New Brunswick, NJ

BG. Early mid-season cultivar with high yield potential. **Origin:** Tomah, WI by E. J. Grygleski. Beckwix x Grygleski #1; crossed 1996; introd. 2011. **Fruit:** medium to large; selection made for high yield potential; total anthocyanins (TAcy) average 12 points higher than Stevens. **Plant:** vigorous; winter hardy.

CNJ95-20-20 (Scarlet Knight™). Early season cultivar with very early color development with exceptionally high fruit anthocyanin content. **Origin:** Rutgers University, New Jersey Agricultural Experiment Station, Chatsworth, NJ by N. Vorsa and J. Johnson-Cicalese. Stevens x NJS98-37 (Franklin x Ben Lear) crossed 1995; selected 2000; introd. 2010. USPP applied for. **Fruit:** large, over 2 g in NJ; ovate to very widely elliptic to occasionally elliptical, with rounded to moderately oblique pedicel end; total TAcy is typically 3 to 7 times greater than Stevens; waxy bloom around calyx, otherwise with slight scattered waxy bloom on lower (calyx) half. **Plant:** stolons moderately coarse; vigorous stolon production.

**CURRANT**

Danny L. Barney, USDA-ARS, Arctic and Subarctic Plant Gene Bank, Palmer, AK

Blackcomb. Late-flowering, high-yielding black currant. **Origin:** McGinnis Berry Crops, Courtenay, B. C., Canada, by R. McGinnis. Ojebyn x Titania; Canada Plant Breeders Rights applied for. **Fruit:** 20% larger than Titania; yields in B.C. more than 50% higher than Titania and Ben Alder. **Plant:** vigorous; flowering late mid-season; better tolerance to late spring frost than Titania; high levels of field resistance to powdery mildew (Podosphaera mors-uvae), formerly Sphaerotheca mors-uvae), and white pine blister rust (Cronartium ribicola); well-suited to machine harvest.

Ores. Midseason black currant. **Origin:** Fruit Breeding Dept., Research Institute of Horticulture, Skiermniwicz, Poland, by S. Pluta and E. Zurawicz. (Ojebyn x S24) x Ceres; crossed 1990; selected 1997; tested as PC-36; introd. 2001 EU PVR 19,040; 15 Apr. 2007. **Fruit:** medium; short to medium strigs; firm; high levels of acid, juice color, and vitamin C; good for juice processing, concentrate, and freezing. **Plant:** medium; spreading habit under weight of fruit; productive; produces adequate numbers of basal shoots; flowers and ripens midseason, similar to Ben Lomond; winter hardy; resistant to powdery mildew and white pine blister rust; highly resistant to black currant gall mite (Cecidophyopsis ribis); moderately susceptible to leaf spot (Drepanopeziza ribis); for commercial plantings; machine harvest recommended.

Ruben. Midseason black currant. **Origin:** Fruit Breeding Dept., Research Institute of Horticulture, Skiermniwicz, Poland, by S. Pluta and E. Zurawicz; Beloruskaya Sladkaya x Ben Lomond; crossed 1990; selected 1997; tested as 83 x 801 and PC-166; introd. 2001 EU PVR 19,039; 22 Jan. 2007. **Fruit:** medium to large; short to medium strigs; very firm; high levels of acid, juice color, and vitamin C;
good for juice processing, concentrate, and freezing. **Plant:** medium; semi-upright, spreading under the weight of fruit; very productive; produces adequate numbers of basal shoots; flowers late; ripens midseason, similar to Ben Lomond; winter Hardy; resistant to powdery mildew and white pine blister rust; moderately susceptible to leaf spot; susceptible to gall mite; for commercial plantings; machine harvest recommended.

**Tahsis.** High-yielding, large-fruited black currant. **Origin:** McGinnis Berry Crops, Courtenay, B.C., Canada, by R. McGinnis. Beloruskaya High-yielding, large-fruited black currant. machine harvest recommended. susceptible to leaf spot; susceptible to gall mite; for commercial plantings; machine harvest recommended.

**Tines.** Early ripening black currant. **Origin:** Fruit Breeding Dept., Research Institute of Horticulture, Skiermience, Poland by S. Pluta and E. Zurawicz. Titania x Ben Nevis; crossed 1990; selected 1997; tested as PC-106; introd. 2001EU PVR 19,038; 22 Jan. 2007. **Fruit:** large; short to medium strips; firm; high acid concentrations; moderate levels of juice color and vitamin C; good for juice processing, concentrate, and freezing. **Plant:** medium; spreading; productive; produces adequate numbers of basal shoots; flowers and ripens early, 5–6 d before Ben Lomond; winter hardy; resistant to powdery mildew; susceptible to leaf spot, white pine blister rust and black currant gall mite; for commercial plantings; machine harvest recommended.

**Whistler.** High-yielding black currant. **Origin:** McGinnis Berry Crops, Courtenay, B.C., Canada by R. McGinnis. Ben Tirran x Beloruskaya Sladkaya x Titania. **Fruit:** very large. **Plant:** spreading; flowers late midseason; tolerates late frost; field immunity to white pine blister rust and resistance to powdery mildew; for hand harvest and U-pick; displays fruit well.

**Wydewood.** High yielding, later-ripening black currant adapted to the midwestern US. **Origin:** University of Missouri/Missouri State University, by P.L. Byers and A.L. Thomas. Selected from wild bushes of *Sambucus canadensis* in 1999; tested as Gordon B; introd. 2011. **Fruit:** medium to large, 86 mg; skin dark; high quality; yields in B.C. more than 50% greater than Titania and Ben Alder; juice quality excellent. **Plant:** slightly spreading; medium vigor; fair field resistance to powdery mildew; good resistance to white pine blister rust; flowers late midseason; good tolerance to late spring frost; machine harvest recommended.

**ELDERBERRY**

**Patrick L. Byers, Greene County Extension Office, University of Missouri Extension, Springfield, MO**

**Bob Gordon.** Consistent yielding elderberry adapted to the midwestern US. **Origin:** University of Missouri/Missouri State University, by P.L. Byers and A.L. Thomas. Selected from wild brushes of *Sambucus aestivalis* in 1999; tested as Gordon B; introd. 2011. **Fruit:** medium to large; 65–117 mg; skin dark; high quality; yields in Missouri; thick-skinned; very high acid (up to 1.4 g/100 mL @ 21 °Brix); no foxiness. **Cluster:** 80–100 berries; loose; conical. **Vine:** vigorous; resistant to bunch rots; late budbreak; heat tolerant; moderate winter hardiness.

**Vintage Germplasm.** Elderberry adapted to Great Lakes region and upper midwestern US, intended for use in streambank/shoreline stabilization and for wildlife food/shelter. **Origin:** USDA-NRCS, East Lansing, MI, by G. Hartman. Selected from wild bushes of *S. canadensis* in 1998; tested as 9084126; introd. 2011. **Fruit:** abundant production; flower clusters medium to large, fragrant. **Plant:** tall, 2.2–3.5 m; spreading to upright growth habit.

**Wydewood.** High yielding, later-ripening black currant adapted to the midwestern US. **Origin:** University of Missouri/Missouri State University, by P.L. Byers and A.L. Thomas. Selected from wild bushes of *S. canadensis* in 1995; tested as Brush Hills 1; introd. 2010. **Fruit:** medium to large, 52–111 mg; skin dark; high quality; TSS 9.8 °Brix; TA (malic) 0.69 g/100 ml; pH 4.7. **Cyane:** ripens uniformly; resistant to shattering; upright position when ripe; 83 g; secondary cymes commonly form below main cymes; abundant florets that are easily removed for use. **Plant:** medium to tall, to 2.2 m; spreading to upright growth habit; budbreak and bloom time later than Adams 2; harvest time 14–26 d later than Adams 2; higher yields than Adams 2 under Midwestern conditions.

**GOOSEBERRY**

**Danny L. Barney, USDA-ARS, Arctic and Subarctic Plant Gene Bank, Palmer, AK**

**Hinsel.** Mid-season red European gooseberry. **Origin:** Fruit Breeding Dept., Research Institute of Horticulture, Skiermience, Poland; by S. Pluta and E. Zurawicz. Hinsel (self-pollinated); selected 1990; tested as AGR-48; introd. 2004; EU PVR S161; 18 Feb. 2008. **Fruit:** bright red; medium, 3.0 g; globose; smooth; good quality; for fresh market, processing, and freezing. **Plant:** growth medium to strong; mostly upright with spreading branches; moderately numerous shoots with thorns; productive; flowers and ripens midseason, similar to Whitesmith; resistant to powdery mildew; moderately susceptible to leaf spot; for home gardens and commercial plantings; machine harvestability unknown.

**Resika.** Mid-season yellow European gooseberry. **Origin:** Fruit Breeding Dept., Research Institute of Horticulture, Skiermience, Poland by S. Pluta and E. Zurawicz. Resista x Karpaty; crossed 1990; selected 1997; tested as AGR-15; introd. 2004; EU PVR S160; 18 Feb. 2008. **Fruit:** yellow; medium, 3.0 g; globose; smooth; good quality for fresh market, processing, and freezing. **Plant:** growth is medium to strong; upright; moderately numerous shoots with thorns; productive; flowers and ripens midseason, similar to Whitesmith; resistant to powdery mildew; moderately susceptible to leaf spot; for home gardens and commercial plantings; machine harvestability unknown.

**GRAPe**

**Christopher L. Owens, USDA-ARS, Grape Genetics Research Unit, Geneva, NY**

**By George.** Late, black-fruited, pistillate wine grape with heat tolerance and fungal disease resistance. **Origin:** Oklahoma City, OK by G.E. Girouard. Ruby Cabernet x *V. aestivalis* JG93 (wild selection by J. Grinstead, Rolla, MO); crossed 1992; selected 2003; tested as GEG 92-1. **Fruit:** black; ripens late October–early November in Oklahoma; thick-skinned; very high acid (up to 1.4 g/100 mL @ 21 °Brix); no foxiness. **Cluster:** 80–100 berries; loose; conical. **Vine:** vigorous; resistant to bunch rots; late budbreak; heat tolerant; moderate winter hardiness.

**Cabernet Diane.** A black-fruited wine grape. **Origin:** Carrollton, IL by L.W. Dressel. Cabernet Sauvignon x Norton; crossed 2001. USPP 20,914; 6 Apr. 2010. **Fruit:** black; round; 2–5 g. **Cluster:** triangular; 90–150 g; well-filled. **Vine:** productive; more cold hardy than Cabernet Sauvignon.

**Cabernet Dore.** A white-fruited wine grape. **Origin:** Carrollton, IL by L.W. Dressel. Cabernet Sauvignon x Norton; crossed 2001. USPP 20,915; 6 Apr. 2010. **Fruit:** light yellow; round; 2–5 g. **Cluster:** triangular to round; 90–150 g; well-filled. **Vine:** productive; more cold hardy than Cabernet Sauvignon.

**Ceraso.** An interspecific, black-fruited wine grape with fungal disease resistance. **Origin:** Mendel University, Brno, Czech Republic, by V. Kraus and M. Michlovsky. Merlan (Merlot x Seibel 13666) x Fratava (Lemberger x Saint Laurent); crossed 1985; introd. 2008. **Fruit:** black; 1.6 g; late-ripening; titratable acidity higher than that of Lemberger. **Cluster:** 265 g. **Vine:** 3.3 kg/vine yield; partial resistance
to downy mildew (*Plasmopara viticola*), powdery mildew (*Erysiphe necator*) and grey mould (*Botrytis cinerea*), not as resistant as Seibel 13666.

**Crimson Cabernet.** A black-fruited wine grape. *Origin:* Carrollton, IL, by L.W. Dressel. Cabernet Sauvignon x Norton; crossed 2001. USPP 20,913; 6 Apr. 2010. **Fruit:** black; round; 2–5 g. **Cluster:** conical; 90–150 g; well-filled. **Vine:** productive; more cold hardy than Cabernet Sauvignon.

**Doonuri.** A black-fruited table grape. *Origin:* Yeungnam University and National Institute of Horticultural & Herbal Crop Science, Korea by H.K. Yun, J.H. Noh, K.S. Park, and S.H. Kim. Schuyler x Campbell’s Early; tested as Wonkyo RA-20; crossed 1982; selected 2001; introd. 2006. **Fruit:** black; round to slightly ovate; 5.1 g; aroma similar to Campbell’s Early with pronounced foxy flavor; mid-season. **Cluster:** medium, 285 to 385 g; conical, occasionally shouldered; tightly filled. **Vine:** vigorous; hardy to –20 °C; resistant to grey mold, moderately resistant to anthracnose (*Elsinoe ampelina*) and downy mildew.

**Fay Rouge.** A high-yielding, mid-season red wine grape. *Origin:* Ceres, CA, by F. Tripplett. F1-2 x T973-20 (Grenache x Ravat Noir); tested as F101-4; introd. 2010. **Fruit:** blue-black; oval; small-medium, 1.8 g; tough skins; 23.1° Brix; 0.9 g/100 ml 79% titratable acidity; pH 3.7; wine medium-bodied, good color and mouth feel; aroma of fresh red and dark fruits with some herbaceousness, similar to Cabernet Sauvignon or Ruby Cabernet. **Cluster:** medium, 213 g; conical, slightly shouldered; loose to well-filled. **Vine:** shoots semi-erect and trailing; very fruitful; 24.3 kg yield.

**IFG 68-175 (Sweet Celebration™).** A red-fruited mid-season, seedless table grape with naturally large berries. *Origin:* Internation Fruit Genetics, LLC, Bakersfield, CA, by D. Cain. Redglobe x Princess; crossed 2001; selected 2003. USPP 21,644; 24 Jan. 2011. **Fruit:** red; round to oval; 7.0 g; rudimentary seeds. **Cluster:** 797 g; conical; dense, requires thinning with gibberellic acid. **Vine:** vigorous.

**Pixie.** A dwarf grapevine that produces inflorescences in preference to tendrils. *Origin:* USDA-ARS, Geneva, NY, and University of California, Davis, by P. Cousins and D. Tricoli; resulted from selection of somatic embryos derived from the L1 cell layer of a Pinot Meunier grapevine; originally planted in 2005. **Fruit:** black; seeded. **Cluster:** perfect and self-fertile. **Vine:** shortened internodes; produces inflorescences in preference to tendrils.

**Plymouth.** Late, black-fruited, self-fertile wine grape with heat tolerance and fungal disease resistance. *Origin:* Oklahoma City, OK by G.E. Girouard. Merlot x *V. aestivalis* JG#3 (wild selection by J. Grinstead, Rolla, MO); crossed 1993; selected 2003; tested as GEG 93-30. **Fruit:** black; ripens late October–early November in Oklahoma; thick-skinned; high acid; no foxiness. **Cluster:** 80–100 berries; loose until veraison; conical. **Vine:** vigorous; resistant to bunch rots; late bud-break; heat tolerant; moderate winter-hardiness.

**Southern Cross.** Late, black-fruited, self-fertile wine grape with heat tolerance and fungal disease resistance. *Origin:* Oklahoma City, OK by G.E. Girouard. Merlot x *V. aestivalis* JG#3 (wild selection by J. Grinstead, Rolla, MO); crossed 1993; selected 2003; tested as GEG 93-27. **Fruit:** black; ripens late October–early November in Oklahoma; thick-skinned; high acid, no foxiness. **Cluster:** 80–100 berries; conical. **Vine:** vigorous; resistant to bunch rots; late bud-break; heat tolerant; moderate winter hardness.

**Sugrathirtsix.** A red-skinned, seedless table grape. *Origin:* Sun World International, LLC, Bakersfield, CA, by T. Bacon and M. Stribm. 97001-198-219 x 93018-070-024; crossed 2001; selected 2005. USPP 22,078; 16 Aug. 2011. **Fruit:** red; round; 3.6 g; mild muscat aroma; rudimentary seeds. **Cluster:** 350 g; cylindrical. **Vine:** medium vigor; very productive, 12 kg yield.

**Sweet Celebration™** see IFG 68-175.

**Tankeumchu.** A black-fruited seeded table grape. *Origin:* Yeungnam University and National Institute of Horticultural & Herbal Crop Science, Korea by J.H. Yun, S.M. Jung, and H.C. Lee. Tano Red x Super Hamburg; tested as Wonkyo Ra-19; crossed 1987; selected 1995; introd. 2007. **Fruit:** black; round to ovate; 7.0 g; skin medium thickness, adheres to flesh. **Clusters:** large, 367–499 g; cylindrical with small shoulders; tight. **Vine:** high vigor, hardy to -15 °C; moderately resistant to downy mildew and anthracnose.

**Valjohn.** Late, black-fruited, self-fertile wine grape with heat tolerance and fungal disease resistance. *Origin:* Oklahoma City, OK by G.E. Girouard. Cabernet Franc x *V. aestivalis* JG#3 (wild selection by J. Grinstead, Rolla, MO); crossed 1993; selected 2003; tested as GEG 93-36. **Fruit:** black; ripens late October–early November in Oklahoma; thick-skinned; high acid; no foxiness. **Cluster:** 80–100 berries; loose until veraison; conical. **Vine:** vigorous; resistant to bunch rots; late bud-break; heat tolerant; moderate winter hardness.

**Victoria Red.** A red, seeded table grape. *Origin:* University of Arkansas, Texas A&M University, and Tarkington Vineyard, by J.N. Moore, J.R. Clark, J. Kamas, L. Stein, F. Tarkington, and M. Tarkington. Ark. 1123 x Exotic; tested as Ark. 1475; crossed 1971; selected 1974; introd. 2010. **Fruit:** bright red; large; oblong to round; seeded; crisp; tender skin; resists cracking; neutral flavor. **Cluster:** 335–477 g; conical to cylindrical, loose. **Vine:** survives in regions with prevalent Pierce’s Disease; hardy to USDA hardness zone 7b.

**Zinthiana.** A black-skinned wine grape. *Origin:* Carrollton, IL, by L.W. Dressel. Zinthandel x Cynthia; crossed 2001. USPP 20,889; 20 Mar. 2010. **Fruit:** black; round; 2–5 g. **Cluster:** 200–300 g; conical; well-filled. **Vine:** productive; more cold hardy than Cabernet Sauvignon.

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**GRAPE ROOTSTOCK**

Christopher L. Owens, USDA-ARS, Grape Genetics Research Unit, Geneva, NY

**Kingfisher.** A root-knot nematode resistant grapevine rootstock. *Origin:* USDA-ARS, Geneva, NY, by P. Cousins. *Vitis* hybrid rootstock selection 4-12A x *Vitis riparia*. original vine was planted in 2002; introd. 2010. **Plant:** 100% success rate of rooting dormant cuttings. **Rootstock performance:** resistant to root-knot nematode (*Meloidogyne incognita*); fruit to pruning weight ratio of 6.5.

**Matador.** A root-knot nematode resistant grapevine rootstock. *Origin:* USDA-ARS, Geneva, NY, by P. Cousins. 101-14 Mgt x *Vitis* hybrid rootstock selection 3-1A; original vine planted 2002; released 2010. **Plant:** 73% success rate of rooting dormant cuttings. **Rootstock performance:** resistant to root-knot nematode; fruit to pruning weight ratio of 9.4.
Minotaur. A root-knot nematode resistant grapevine rootstock. 

Rootstock performance: resistant to root-knot nematode; fruit to pruning weight ratio of 8:8.

HAZELNUT

Shawn A. Mehlenbacher, Oregon State University, Corvallis, OR

Nut: small; 2.4 g; 51% kernel by weight; medium-brown; husk 70% longer than nut; pelicle completely removed by dry heat. 
Tree: vigorous; upright; moderate suckering; female and male anthesis early; cold-hardy; incompatibility alleles S1S2.

Nut: large; 4.0 g; round; 48% kernel by weight; easy pellicle removal; matures with Ennis. 
Tree: medium vigor; upright; early flowering; incompatibility alleles not determined.

Nut: small to medium; 2.8 g; 48% kernel by weight; light-brown with stripes; attractive; pelicle has much fiber, 70% of fiber removed by dry heat; husk 50% longer than nut and slit on the side; 95% fall free at maturity; maturity 5 d before Barcelona; flavor and texture good. 
Tree: intermediate vigor; gobose habit; moderately productive; moderate catkin set; high pollen viability; pollen shed very late; very high resistance to eastern filbert blight (Anisogramma anomala); intermediate response to bud mites (Phytophthas avellanae and Cecidophyopsis verminformis); incompatibility alleles S1S2S26.

Nut: very large; 4.1 g; 43.5% kernel by weight; pelicle has little fiber; pelicle removal with dry heat 90%; husk slightly longer than nut; free-husking; few blank nuts; matures 4 d before Barcelona. 
Tree: semi-erect; moderate vigor; somewhat weeping; precocious; high-yielding; resistant to bud mites; incompatibility alleles not determined.

Nut: medium; 2.5 g; 47% kernel by weight; pelicle has little fiber; pelicle removal with dry heat 95%; husk equal in length to the nut; free-husking; very few blank nuts; matures late; one week after Barcelona. 
Tree: semi-erect; moderately vigorous to vigorous; precocious; resistant to bud mites; incompatibility alleles not determined.

Nut: large; 3.7 g; light brown; attractive; 45% kernel by weight; pelicle has moderate fiber; 60% of pelicle removed by dry heat; husk 50% longer than nut; about 70% free-husking; flavor and texture very good; few defects; occasional split shells at apical end; matures 0–3 d after Barcelona. 
Tree: moderately vigorous 65% of Barcelona; upright habit; productive; very high level of resistance to eastern filbert blight; resistant to big bud mites; incompatibility alleles S1S2.

Nut: medium; 2.4 g; round; 50% kernel by weight; easy pellicle removal; matures 15 d after Tonda Gentile delle Langhe. 
Tree: medium vigor; semi-spaying; medium flowering; incompatibility alleles not determined.

Nut: medium; 2.5 g; round; 50% kernel by weight; easy pellicle removal; matures 15 d after Tonda Gentile delle Langhe. 
Tree: medium vigor; semi-spaying; medium flowering; incompatibility alleles not determined.

Nut: small; slightly long; compressed; husk equal in length to nut; free-husking; matures late. 
Tree: contorted shoots; young leaves purple, fading to green as they age; resistant to eastern filbert blight; intermediate susceptibility to bud mites; incompatibility alleles S10S7.

Nut: medium; 2.9 g; round; 49% kernel by weight; easy pellicle removal; matures 10 d after Tonda Gentile delle Langhe. 
Tree: semi-erect; later flowering; incompatibility alleles: S10S7.

Nut: small; 2.3 g; 51% kernel by weight; medium-brown shells; pelicle has moderate fiber; 80% of fiber removed by dry heat; husk equal in length to nut; free-husking; flavor and texture very good; few nut and kernel defects; matures 3 d after Barcelona. 
Tree: vigorous and upright; moderately productive; catkins abundant; high pollen viability; pollen sheds very late in season; very high resistance to eastern filbert blight; moderate resistance to bud mites; incompatibility alleles S1S2S26.

Nut: small; 2.2 g; 46% kernel by weight; pelicle has little fiber; 90% of pelicle removed by dry heat; husk 75–100% longer than nut and slit on side; free-husking; flavor and texture excellent; few nut and kernel defects; nuts mature 7–10 d after Barcelona. 
Tree: moderately vigorous; 77% of size of Barcelona; gobose; productive; susceptible to eastern filbert blight, moderately susceptible to big bud mites; pollen shed very early; female receptivity early; incompatibility alleles S1S2.

Uriase de Valcea. Hazelnut for the in-shell market. Origin: Statiunea de Ceretace Dezvoltare pentru Pomicultura Valcea, Romania, by
E. Turcu, I. Botu, and S. Preda. Ennis x Purple Filbert; crossed 1986; selected 1992; tested as H147–7–87; introd. 2002. **Nut:** very large, 4.8 g; ovoid; 49% kernel by weight; easy pellicle removal; good flavor; matures 8 d before Ennis. **Tree:** low to medium vigor; upright; female and male anthesis late; incompatibility alleles S_{1}S_{20}.

**Valhalla** 22. Hazelnut for in-shell market. **Origin:** Stazione di Cercetare Dezvoltare pentru Pomicultura Valcea, Romania, by I. Botu, I. Bodea, E. Turcu, E. Ioachim, and C. Catusanu. clone of Imperiale de Trebizond (syn. Kargalak, Karidaty, Furfulak); tested as CI 8/22; introd. 1980. **Nut:** large, 3.9 g; oblate; 49% kernel by weight; pellicle has little fiber; husk much longer than nut and slit on side; matures 12 d before Ennis. **Tree:** low vigor; spreading; somewhat pendulous; produces many suckers; precocious and high-yielding; resistant to bud mites; early flowering; incompatibility alleles: S_{2}S_{10}.

**Yamhill.** Hazelnut cultivar for kernel market. **Origin:** Oregon State University, Corvallis, OR, by S.A. Mehlenbacher, D.C. Smith, and R. McCluskey. OSU 296.082 x VR 8–32; crossed 1990; selected 1999; tested as OSU 542.102; introd. 2008. **Nut:** small, 2.3 g; 49% kernel by weight; pellicle has little fiber; half of pellicle removed with dry heat; husk equal in length to nut; free-husking; few blank nuts, doubles, and moldy kernels; matures early, 7–10 d before Barcelona. **Tree:** spreading with flat top, high nut yield; flowering early, with Barcelon; resistant to eastern filbert blight; highly resistant to bud mites; incompatible alleles: S_{0}S_{20}.

**KIWIFRUIT**

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**H.-W. Huang, South China Botanical Garden/South China Institute of Botany Chinese Academy of Sciences, Tianhe District, Guangzhou, P.R. China**

Raffaele Testolin, Department of Crop Science and Agricultural Engineering University of Udine Via delle Scienze, Udine, Italy

79-2. See Lushanxiang.
79-4. See White.
134.16. See Belén.
Ac 171.76. See Soreli.
Apple Sensation. See Ganmi No 2.

**Belén (134.16).** Male *Actinidia chinensis* selected as pollenizer for Jintao and Soreli. **Origin:** Università degli Studi di Udine, Italy, by R. Testolin. Zaoxian (79–05, F.T.-79–5) x O.P.; crossed 1993; selected 2000–2001; introd. 2001; EU PVR No 23,148; 7 July 2008. **Vine:** flowering synchronized with that of Jintao and Soreli; pollen viability good; seed setting and fruit sizing good; tetraploid.

**Boverlig 02.** See Earligreen®.

**Bruce.** Male *A. chinensis* selected as pollenizer for Hort16A. **Origin:** The Horticulture and Food Research Institute of New Zealand Ltd., Te Puke, New Zealand, by R.G. Lowe and B. Hofstee. Hort16A x CK39-16; crossed 1995; selected 2000; introd. 2007; NZ PVR 2,740; 14 Jan. 2009. **Vine:** flowering well synchronized with that of Hort16A; effective pollenizer; fruit produced larger than with other pollinizers; pollen production and viability good; diploid.

C6. See Jintao.
Chuhong (Panda™ Forest Red Kiwi). Female *A. chinensis* grown in Shaanxi, China with green flesh and a circle of red flesh around a central core. **Origin:** Hunan Horticultural Research Institute, Changsha, Hunan. Selected in 1994 from the wild, Xupu County, Hunan; tested as Redcore-1; introd. 2005. Registered by Hunan Provincial Plant Registration Authority, Sept. 2004. **Fruit:** long, ellipsoidal, marked beak at stylar end; medium, 80 g; skin dark green, essentially hairless; flesh green with circle of red flesh around central white core; sweet, 16.5 °Brix; red coloration more intense in fruit grown at higher altitudes; storage life moderate. **Vine:** vigorous; precocious; most fruit as singles; budbreak mid March; flowering late April to early May; harvested late September in Shaanxi.

**CK02.** See Sparkler.

**CK03.** See Meteor.

**CONVI (Green Light®, CONVI97001, Green Star).** Mutation of Hayward Clone K (*A. delicosa*) with earlier maturation. **Origin:** CO.N.VI. DI Spada Renato e Sergio S.S., Brisighella, Italy, selected by G. Zuccherelli, Cesena, approx. 1992; EU PVR No 24,923; 4 May 2009. **Fruit:** similar to Hayward, perhaps less acid; harvested 30–40 d before Hayward. **Vine:** very vigorous; productive; flowers about same time as Hayward.

**CONVI97001.** See CONVI.

**Cuixiang (XiMi No 9).** Female *A. delicosa* with green flesh. **Origin:** Xi’an Kiwifruit Institute, Shaanxi, China and Agricultural Experimental Station of Zhouzhi County, Shaanxi, China. Selected in 1998 from the wild, Qinling Mountains, Jiuyu Village, Louguan, China; registered by Shaanxi Fruit Registration Committee, Mar. 2008. **Fruit:** ovoid, protruding at stylar end; medium, 92 g; skin yellowish brown; hairs sparse, brown, stiff, readily shed; flesh green, juicy, good flavor, vitamin C 100–185 mg 100 g⁻¹ fresh wt.; core small. **Vine:** precocious; highly productive; robust; budbreak mid March; flowers late April to early May; harvested early September in Zhouzhi.

**Cuiyu (Liangmei No 1).** Female *A. chinensis* with green flesh. **Origin:** Hunan Horticultural Research Institute, Changsha, Hunan, China. Selected from the wild, Longzhuzhuangw, Xupu County, Hunan, China, 1994; tested as Liangmei No 1; released by Hunan Provincial Committee for Crop Variety Registration, September 2001. **Fruit:** ovoid, greenish brown, hairs short, downy, easily shed; flesh green, good flavor, 14.5–17.3 °Brix; vitamin C 95–145 mg 100 g⁻¹ fresh wt.; stores well. **Vine:** vigorous; moderate; productive; precocious; most fruits as singles; tolerant of adverse conditions and disease; budbreak mid March; flowers late April to early May; harvested early October in, Changsha, Hunan; tetraploid.

**Earligold.** See Hort16A.

**Earligreen® (Boverlig 02).** Bud mutation of Hayward selected for early maturation. **Origin:** selected near Verona, Italy by A.A. Bovo. EU PVR 26,756; 22 Feb. 2010. **Fruit:** similar to Hayward. **Vine:** vigor perhaps less than Hayward; fruit harvested 40–50 d earlier; maturation on vine uneven; shelf-life short.

**Elizabeth.** See Lushanxiang.

**Emihoutao No 1 (Jinkui, Jinshui II-16-11).** Female *A. delicosa* with green flesh that is grown mainly in Jiangxi, Fujian, Hubei, Shanghai and Anhui, China. **Origin:** Fruit and Tea Institute, Hubei Academy of Agricultural Science, Wuhan, Hubei, China. Zhuxi-2 (wild 1980) selection from Jianzhong Village, Hubei Province) x O.P.; selected 1986; tested as Jinshui II-16-11; registered by Hubei Provincial Crop Registration Committee, 1993. **Fruit:** similar to those of Hayward; wider towards stylar end; some fruit abnormal shape; 100 g; skin brown; hairs stiff, dense, easily shed; flesh green, juicy; sweet, 18–21 °Brix; vitamin C up to 240 mg 100 g⁻¹ fresh wt.; core small; storage life long. **Vine:** very vigorous; productive;
tolerant of environmental stresses such as drought, waterlogging, cold; more resistant to pests; budbreak early-mid March; flowers late April early May; harvested late October early November; hexaploid.

**First Emperor.** See Lushanxiang.

FT 79-3. See Gammi No 3.

FT 79-5. See Gammi No 1.

FY 79-1. See Gammi No 2.

**Ganmi No 1 (Zaoxian No 1, FT-79-5).** Female *A. chinensis* with yellow flesh that is grown mainly in Jiangxi, Zhejiang, and Anhui, China. **Origin:** Institute of Horticulture, Jiangxi Academy of Agricultural Science, Nanchang, China. Selected in 1979 from the wild at Laoshiwu, on border between Fengxian and Xiushui Counties, northwestern Jiangxi, China; originally named FT-79-5; tested as Zaoxian 1985, registered as Gammi No 1 by Jiangxi Provincial Cultivar Registration Committee, 1992. **Fruit:** medium-large, 85 g; cylindrical; skin green-brown to pale brown; hairs soft, dense, easily shed; flesh greenish-yellow to yellow, juicy; flavor good, 12–17 °Brix; vitamin C 75–100 mg 100 g^-1 fresh wt.; core small; storage life medium. **Vine:** vigorous; productive; fruiting mainly on spur and short shoots; less tolerant of stress, particularly wind; requires good shelter, drainage and water supply; fruit drop can occur; budbreak mid March; flowers mid-late April; fruit mature very early, late August–early September, China; tetraploid.

**Green Light.** See CONVI.

**Green Star.** See CONVI.

**Guichang (Qianzi 82-3).** Female *A. delicosa* with green flesh. **Origin:** Fruit Research Institute, Guizhou, China. Selected 1982 from the wild, Ziyun County, Guizhou, China; tested as Qianzi 82-3. **Fruit:** 85 g; long, cylindrical; skin brown; hairs long, grey-brown, stiff; flesh light green, juicy, 12–16 °Brix; vitamin C 110 mg 100 g^-1 fresh wt. **Vine:** vigorous; precocious; high yielding; adaptable; tolerant of environmental stress; budbreak mid March; flowering late April–May; harvested October in China.

**Huamei No 2.** See Yumihoutao No 2.

**Huayou (Panda™ Golden Kiwi).** Female, fruit flesh yellow or light green, described as hybrid between *A. chinensis* and *A. delicosa* but closer in appearance to *A. chinensis*. **Origin:** Zhouzhi Kiwifruit Experiment Station, Zhouzhi, Shaanxi, China; O.P. seed from the wild in China); crossed by M.A. McNeilage 1987; selected in 1991 by R.G. Lowe and H.D. Marsh; introd. 1995. NZ PVR 1056; 14 Nov. 1995. **Fruit:** 95–100 g; ovoid, tapering towards styal end, prominent beak; skin green-brown to brown, hairs soft, silky, easily shed; flesh yellow-green to bright yellow depending on harvest time; core small; flavor strongly aromatic, “tropical”, sweet, approx. 16 °Brix; vitamin C 110 mg 100 g^-1 fresh wt.; storage life moderate. **Vine:** vigorous moderate, vegetative growth continues late in season, long growth period for fruit; productive; budburst mid August; flowering mid October; harvested April/May in Te Puke, New Zealand; diploid.

**Jinhui II-16-11.** See Emihoutao No 1.

**Jingold™.** See Jintao.

**Jinkui.** See Emihoutao No 1.

**Jinshui II.** See Emihoutao No 1.

**Hort16A (ZESPRI® GOLD, Earligold).** Female *A. chinensis* with yellow flesh. **Origin:** New Zealand Department of Scientific and Industrial Research/The Horticulture and Food Research Institute of New Zealand Ltd., Auckland and Te Puke, New Zealand. Ck01_01_01_01 x Ck15_01 (both derived from seed accessions from the wild in China); crossed by M.A. McNeilage 1987; selected in 1991 by R.G. Lowe and H.D. Marsh; introd. 1995. NZ PVR 1056; 14 Nov. 1995. **Fruit:** 95–100 g; ovoid, tapering towards styal end, prominent beak; skin green-brown to brown, hairs soft, silky, easily shed; flesh yellow-green to bright yellow depending on harvest time; core small; flavor strongly aromatic, “tropical”, sweet, approx. 16 °Brix; vitamin C 110 mg 100 g^-1 fresh wt.; storage life moderate. **Vine:** vigorous moderate, vegetative growth continues late in season, long growth period for fruit; productive; budburst mid August; flowering mid October; harvested April/May in Te Puke, New Zealand; diploid.

**Hongyang (Red Sun, RS1).** Female *A. chinensis*, with yellow flesh around a red core that is grown mainly in Sichuan, Shaanxi, and Henan, China. **Origin:** Sichuan Provincial Natural Resources Research Institute, Chengdu, Sichuan, China and Agriculture Bureau, Cangxi County, Sichuan, China. O. P. seed from the wild, Henan, China; selected 1990; introd. 1994; registered 1997 by the Sichuan Provincial Crop Cultivar Registration Committee, USPP and NZ PVR applied for (under denomination RS1). **Fruit:** small, 60–70 g; obovoid, styal end deeply depressed; skin dark green or greenish-brown; hairs, fine, downy, readily shed; flesh green-yellow to yellow, circle of red around white core; production of anthocyanins inhibited by high temperatures and drought; texture fine; sweet, 16–20 °Brix; vitamin C 200 mg 100 g^-1 fresh wt. **Vine:** vigorous weak; disease susceptible; precocious; productivity high with high flower production and fruit set; vulnerable to heat and drought; budbreak early March; flowering mid April; harvested early September in China; diploid.

**Jinshui II-16-11.** See Emihoutao No 1.

**Jinshui I.** See Emihoutao No 1.

**Jingold™.** See Jintao.

**Jinkui.** See Emihoutao No 1.

**Jinshui II-16-11.** See Emihoutao No 1.

**Jinshui II-16-11.** See Emihoutao No 1.
Jintao (C6, WIB-C6, Jingold™). Female *A. chinensis* with yellow flesh. Origin: Wuhan Institute of Botany, Chinese Academy of Sciences, Wuhan, Hubei, China. Selected in 1981 as Wuzhi 81-1 from the wild, Wuhan County, Jiangxi, China; tested as Wuzhi No 6 in China and as C6 in Europe 1998–2001; introd. 2001. EU PVR 23,147 as Jintao; 7 July 2008; protected by National Forestry Cultivar Registration Committee; S-SV-AC-018-2005; 2005. **Fruit**: 90 g; mainly borne as singles; long, cylindrical, round in cross section; regular in shape and size; skin yellow; brown hairs, short, thick, downy, readily shed; flesh green-yellow to orange-yellow; juicy; sweet, 15–16 °Brix, vitamin C 180–250 mg 100 g⁻¹ fresh wt.; core small, soft; storage and shelf life long, better than many *A. chinensis* cultivars; fruit of young vines prone to cracking if water supplies fluctuate. **Vine**: moderately vigorous; precocious; highly productive; budbreak early-mid March; flowering late April to early May; harvested early October in Italy; tetraploid.

Jinxiang. Female *A. deliciosa* with green flesh. Origin: Horticulture Station, Fruit Research Institute, Yangling, Shaanxi and Shannxi Ocean Fruit and Food Development Co. and Hufeng Ecology Agriculture & Forestry Science & Technology Co., Ltd., Shannxi, China. Selected 1995 from nursery seedlings (unstated origin); tested as 95-1; registered as Jinxiang by Shaanxi Provincial Fruit Registration Committee. Mar. 2004. **Fruit**: 90 g; ellipsoidal, uniform, styler end deeply depressed; skin yellow-brown; hairs, yellowish, short, matted, flesh, green, juicy, good texture, sweet flavor, 14 °Brix, vitamin C 70 mg 100 g⁻¹ fresh wt.; core small; storage medium. **Vine**: vigorous; adaptable, tolerant of calcareous soils; most flowers as singles; budbreak mid March; flowers early-mid May; harvested mid September in Shaanxi.

Jinyan. Female interspecific hybrid (*A. eriantha* × *A. chinensis*) with yellow flesh. Origin: Wuhan Botanical Garden, Chinese Academy of Sciences, Hubei, China. *A. eriantha* × *A. chinensis*; crossed 1984; tested as M3; registered 2006; National Forestry Cultivar Registration Committee National Cultivar No. S-SV-AE-019-2010; 2010. **Fruit**: large, 100 g; cylindrical, slightly sunken at styler end; skin thick, yellow-brown with small red spots; hairs, fine, sparse, flesh brilliant yellow; juicy; aromatic; sweet, 16 °Brix; high mineral content; vitamin C 110 mg 100 g⁻¹ fresh wt.; core small, soft; storage life similar to Hayward. **Vine**: vigorous; precocious; high productivity; tolerant of adverse conditions; no tendency towards biennial bearing; budbreak mid March; flowering late April to early May; harvested late October to early November in China; long growth period for fruit; tetraploid.

Kamitsu. See Gamni No 2.

Kuimi. See Gamni No 2.

Liangmei No 1. See Cuiyu.

Lushanxiang (79-2, Elizabeth, First Emperor, Yellow Joy). Female *A. chinensis* with yellow flesh that is grown mainly in Fujian and Jiangxi, China. Origin: Lushan Botanical Garden, Jiangxi and Chinese Academy of Sciences, Jiangxi, China. Selected in 1979 from the wild, Pingyuan Village, Luoxi, Jiangxi; named when registered in 1985. **Fruit**: uniform, 90 g; cylindrical; handsome appearance; skin brownish yellow; hairs soft, short, easily shed; flesh yellow, juicy, sweet, 16 °Brix, aromatic, high vitamin C 165 mg 100 g⁻¹ fresh wt.; storage and shelf life short. **Vine**: vigorous; precocious; highly productive; budbreak early March; flowering late April early May; harvested late September, China; tetraploid.

Megakivi™. See Tsechelidis.


Miliang No. 1. Female *A. deliciosa* with green flesh planted mainly in Guizhou, Hunan, Zhejiang, and Fujian, China. Origin: Department of Biology, Jishou University, Hunan, China. Selected in 1983 from the wild near Miliang Village, Hunan; named and registered in 1989 by Hunan Provincial Cultivar Registration Committee. **Fruit**: uniform, 90 g; long, cylindrical, styler end slightly protruding; skin dark brown; hairs long, stiff; flesh yellow-green; juicy; sweet, 15–19 °Brix; vitamin C high 140–200 mg 100 g⁻¹ fresh wt.; storage life medium. **Vine**: very vigorous; adaptable, tolerant of environmental stress; high yields; budbreak early March; flowering late April; harvested mid October in China; hexaploid.

Moshan No. 4. Male *A. chinensis* pollinizer that is widely planted in China. Origin: Wuhan Institute of Botany, Chinese Academy of Sciences, Hubei. Selected in 1984 from the wild in Wuning County, Jiangxi Province; named 2006 (S-SV-AC-016-2006). **Vine**: growth habit compact; vigorous medium; resistant to pests and diseases; flowering period very extended; floriferous, 4–5 flowers per cyme; pollen production high; pollen viability and germinability high; flowering mid April to early May; Wuhan, China, coinciding with most tetraploid *A. chinensis* and early *A. deliciosa* female cultivars; diploid.

Panda™ Forest Red Kiwi. See Chuhong.

Panda™ Golden Kiwi. See Huayou.

Qianzi 82-3. See Guichang.

Qinnai. Female *A. deliciosa* with green flesh and is most widely planted cultivar in China, mainly Shaanxi, Henan, and Guizhou provinces. **Origin**: Shaanxi Provincial Fruit Research Institute, Yangling, Shaanxi, China and Zouzhou Actinidia Research Station, Shaanxi, China. Selected in 1979 from the wild, Jiuyu, Shaanxi; originally tested as Zouzhou 111; registered 1986. **Fruit**: large, 100 g; ovoid, distinctive beak at distal end; skin greenish-brown, rough; hairs stiff, yellow-brown; sepals persistent; flesh light green; fine texture; juicy; 14–17 °Brix; vitamin C high 190–240 mg 100 g⁻¹ fresh wt.; storage life medium. **Vine**: robust; drought tolerant; adaptable; very productive, mainly single fruit on short shoots; budbreak early-mid March; flowering late April early May; harvested late September early October in China; hexaploid.

Red Sun. See Hongyang.

RS1. See Hongyang.

Sanuki Gold. Female *A. chinensis* with yellow flesh that is grown in Japan. **Origin**: Kagawa Agricultural Experiment Station, Sakaide, Japan by T. Fukuda, T. Katagiri, and K. Suezawa. Gamni No 2 × FCM; crossed 1990; tested as APC-40; introd. 2003. Japanese PVR No 12,984; 23 Mar. 2005. **Fruit**: very large, 160–180 g; squat, wider at styler end; skin greenish-brown, rough; hairs stiff, yellow-brown; sepals persistent; flesh bright yellow, 16–18 °Brix; storage life short. **Vine**: vigorous; productive; flowering early-mid May; harvested early-mid October in Japan.

Soreli (Ac 171.76). Female *A. chinensis* with green flesh planted mainly in Fujian and Jiangxi, China. **Origin**: Lushan Botanical Garden, Jiangxi and Chinese Academy of Sciences, Jiangxi, China. Selected in 1979 from the wild, Pingyuan Village, Luoxi, Jiangxi; named when registered in 1985. **Fruit**: uniform, 90 g; cylindrical; handsome appearance; skin brownish yellow; hairs soft, short, easily shed; flesh yellow, juicy, sweet, 16 °Brix, aromatic, high vitamin C 165 mg 100 g⁻¹ fresh wt.; storage and shelf life short. **Vine**: vigorous; precocious; highly productive; budbreak early March; flowering late April early May; harvested late September, China; tetraploid.

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Sparkler (CK02). Female *A. chinensis* selected as pollinizer for Hort16A. **Origin:** The Horticulture and Food Research Institute of New Zealand Ltd., Te Puke, New Zealand by R.G. Lowe. Seed accession from the wild, unknown provenance; selected 1994; introd. 1997. New Zealand PVR 1,225; 14 May 1997. **Vine:** flowering starts shortly after Hort16A; very floriferous; no red on petals; diploid.

Summerfaenza. Male *A. deliciosa* selected as pollinizer for Summerkiwi 3373. **Origin:** V. Ossani, Faenza, Ravenna, Italy. Hayward x ML 2 (fruiting male); crossed 1986; selected Dal Pane Vivai, Castelbolognese, Ravenna, Italy; introd. 2000. EU PVR 17,333; 20 Nov. 2006. **Vine:** flowers with Summerkiwi 3373 and before Hayward.

Summerkiw*. See Summerkiwi 3373.

Summerkiwi 3373 (Summerkiw*), Female *A. deliciosa* with green flesh and that is early maturing. **Origin:** V. Ossani, Faenza, Ravenna, Italy. Hayward x ML 2 (fruiting male); crossed 1986; selected Dal Pane Vivai, Castelbolognese, Ravenna, Italy; introd. 2000. EU PVR 16,914; 27 Feb. 2006. **Fruit:** 108 g; similar to Hayward in appearance, shape, hairiness, but more cylindrical; slight beak at stylar end; core softer and flavor less acidic than Hayward. **Vine:** vigorous; flowers single; flowers shortly before Hayward in Italy; fruit harvested about 7 weeks before Hayward; hexaploid.

Tsechelidis. Female *A. deliciosa* with green flesh fruit, *A. delicosa*, selected for size of fruit, marketed as Megakivi™, grown mainly in Greece. **Origin:** approx. Tsechelidis, Episkopi, Anthemion, Greece. Hayward O.P.; crossed 1991; selected 1994. EU PVR; 23,290 (as T 1910); 21 July 2008. **Fruit:** large, >160 g, approx. 50% heavier than Hayward; oblong, slightly depressed at stylar end; uniform, few misshapen; skin brown, hairy; flesh green. **Vine:** more vigorous than Hayward; budbreak, flowering, fruit maturation slightly ahead of Hayward.

Turandot. See Gammi No 2.

White (97-4). Female *A. eriantha* with dark green flesh and particularly large, peelable fruit with high vitamin C content. **Origin:** Institute of Horticulture, Zhejiang Academy of Agricultural Science, Hangzhou, China. Selected in 1997 from the wild near Wenzhou, Zhejiang; tested as #97-4; named in 2005. PVR No. CNA200505673.0; 10 June 2008. **Fruit:** 90 g, much bigger than from most wild vines; long, cylindrical; skin green-brown; readily peelable; hairs dense, long, white; flesh dark green, not juicy; vitamin C very high 600 mg 100 g–1 fresh wt.; storage life medium. **Vine:** vigorous; tolerant of adverse conditions; fruit harvested late October in China, 2 weeks after Bruno; diploid.

WIB-C6. See Jiptao.

Wuzhi 81-36. See Wuzhi No. 3.

Wuzhi No 3 (Wuzhi 81-36). Female *A. chinensis* with green flesh that is grown mainly in Hubei and northern Guangdong. **Origin:** Wuhan Institute of Botany, Chinese Academy of Sciences, Hubei, China. Selected in 1981 from the wild, Louxi, Wuning County, Jiangxi; originally tested as Wuzhi 81-36; extensively tested as Wuzhi 3; released 1989; registered 2007, S-SV-AC-017-2007 by National Forestry Cultivar Registration Committee. **Fruit:** 85 g; ellipsoidal; skin dark green; hairs, soft, sparse, readily shed; flesh bright green; juicy; aromatic; 12–15 °Brix; vitamin C high, 275–300 mg 100 g–1 fresh wt. **Vine:** very vigorous and productive; no tendency to biennial bearing; tolerant of adverse conditions; well adapted to warmer climates; fruit quality better at high altitudes; budbreak mid March; flowering late April; harvested late August early September in China; tetraploid.

Ximi No 9. See Cuixiang.

Xuxiang. Female *A. deliciosa* with green flesh grown mainly in northern Jiangsu, Shandong and Henan provinces and around Shanghai. **Origin:** Xuzhou Fruit Farm, Jiangsu, China. Hayward O.P.; introd. 1975 from Beijing Botanical Garden, Chinese Academy of Sciences; tested as Xuzhou 75-4; registered Nov. 1990. **Fruit:** 75 g; oblong, cylindrical; skin thin, yellowish-green, easily peeled; hairs stiff, yellow-brown; flesh green, 14 °Brix, vitamin C 100–120 mg 100 g–1 fresh wt.; storage life medium. **Vine:** vigor moderate; precocious; fruit thinning required; budbreak mid March; flowering late April to early May; harvested late October in China; hexaploid.

Yate (Zhouzhi No 1). Female *A. deliciosa* with green flesh. **Origin:** Shaanxi Fruit Research Institute, Yangling, Shaanxi, China. Selected from the wild, Qinling Mountains, Hu County, Shaanxi, 1983; officially registered 1993. **Fruit:** large, 120 g; cylindrical; skin brown; hairs stiff; flesh green, vitamin C high, 190 mg 100 g–1 fresh wt., core small; storage life good. **Vine:** growth habit compact, internodes short; well adapted to high density plantings; precocious; very productive; fruit mature late October; about 3 weeks after Qinmei; hexaploid.

Yellow Joy. See Lushanxiang.

Yumihoutao No 2 (Huamei No 2). Female *A. deliciosa* with green flesh. **Origin:** Xixia Kiwi fruit Research Institute, Henan, China, by S.-L. Li, Z.-Q. Cao, and X.-L. Wang. Selected in 1989 from the wild, Wafang, Shimen Village, Henan; tested as 86-5-1; evaluated as Huamei No 2 by the Department of Science and Technology, Henan Province, June 1999; registered as Yumihoutao No 2 by Henan Province Forestry Cultivar Registration Committee, October 2000. **Fruit:** large, 110 g; skin yellowish brown; hairs long, dense, persistent; flesh light green; juicy; 9.4–14.6 °Brix, vitamin C 165 mg 100 g–1 fresh wt. **Vine:** vigorous; precocious; productive; cold resistant; disease resistant; drought tolerant; budbreak late March; flowering early May; harvest early-mid September in Xixia; hexaploid.

Zaoxian No 1. See Gammi No 1.

ZESPRI® GOLD. See Hort16A.

Zhouzhi No 1. See Yate.

MANGO

Richard J. Campbell, Fairchild Tropical Botanic Garden, Coral Gables, FL

Coconut Cream. Semi-dwarf tree, 0.5 kg yellow mango with a pink blush. **Origin:** Zill High Performance Plants, Boynton Beach, FL, by G. Zill. Edward x Gary; crossed 2000; tested as C-20; introd. 2011. USPP applied for. **Fruit:** oblong; 454 g; yellow ground color with pink blush; flavor of coconut cream; Brix often 20°+; aroma weak, pleasant. **Tree:** semi-dwarf, 3 to 4.5 m; leaves large, light green; yield moderate; ripens midseason in Florida, June and July; disease tolerance of bloom and fruit excellent.

NECTARINE

Ksenija Gasic, Department of Environmental Horticulture, Clemson University, Clemson, SC

W.R. Okie, USDA-ARS, Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA

Ambra®. Yellow-fleshed, melting, clingstone nectarine. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Stark RedGold x Mayfire; tested as BO 85151169; introd. 1995. **Fruit:** large, 160 g; round-oblong, symmetrical to slightly asymmetrical; red blush
covering 75–80% of yellow ground color; flesh yellow; firm, melting; clingstone with no red near pit; mild flavor; ripens in early July, 11 d before Redhaven in Bologna. Tree: vigorous, upright-spreading, highly productive; flowers showy, self-fertile; medium chilling requirement; leaf glands reniform.

**Burnett twenties.** Yellow-fleshed, melting clingstone nectarine. **Origin:** The Burchell Nursery Inc., Oakdale CA, by J.K. Slaughter and T.H. Gerds. Mayglo O.P.; tested as E45.013; USPP 21,724; 22 Feb. 2011. **Fruit:** large; uniform; round to oblate; medium-red to dark-red blush covering 85–95% of light yellow ground color; flesh yellow-orange; firm, dense, melting, sweet, acidic, slightly astrignent; ripens 27 May to 5 June, 7–10 d before Mayglo in San Joaquin Valley, CA. **Tree:** medium-large; vigorous; upright; productive; flowers showy; self-fertile; 350 h chilling requirement; leaf glands small, globose.

**Giant Bright.** Yellow-fleshed, clingstone nectarine. **Origin:** Le Grand CA by L.G. Bradford. Western Pride x August Fire; USPP 21,927; 24 May 2011. **Fruit:** very large; uniform; globose; dark-red overcolor smoothly blending into reddish-orange ground color with little to moderate yellow-orange freckling towards apex; flesh brilliant yellow with red streaking next to stone; firm; juicy; acidic and sweet; ripens 14–24 July in San Joaquin Valley, CA. **Tree:** medium; spreading; dense; flowers small; chilling requirement 650 h; leaf glands large, reniform.

**Hortarine 1.** Yellow-fleshed, clingstone nectarine. **Origin:** The New Zealand Institute for Plant and Food Research Ltd., New Zealand, by M. Malone. Peacharine O.P.; USPP 20,528; 8 Dec. 2009. **Fruit:** small to medium; round; strongly pointed; dark-red overcolor covering 50% of yellow ground color; flesh yellow with no anthocyanin present; firm, non-melting, strong aromatic flavor; ripens late-season mid-February in Hawke’s Bay, New Zealand. **Tree:** low-medium vigor; open and spread; flowers showy; large, self-fertile; chilling requirement 800 h; leaf glands reniform.

**May Bright.** Yellow-fleshed, clingstone nectarine. **Origin:** Le Grand, CA by L.G. Bradford. (Early Diamond x May Fire) x (unknown low-chill peach O.P.); USPP 21,928; 24 May 2011. **Fruit:** medium to large; uniform; ovate; dark red overcolor covering reddish-orange ground color with light orange-yellow freckling toward the apex; flesh yellow with no red, very firm, melting; ripens May 24–June 4 in San Joaquin Valley, CA. **Tree:** medium; moderately vigorous; vase type; very productive; flowers showy; self-fertile; chilling requirement 400 h; leaf glands globose.

**Rebus 028.** Yellow-fleshed, slow-melting nectarine. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Big Top x May Fire; tested as BO 9603028; introd. 2010. **Fruit:** 160 g; round; bright red overcolor covering 90–100% yellow ground color, very little russetting, no cracking; flesh yellow with some anthocyanins; very firm, slow-melting (as Big Top nectarine), hangs well; clingstone, red near pit; very good flavor (low-acid type), aromatic; ripens in second half of June, 16 d before Redhaven, in Bologna. **Tree:** regular; medium vigor; very productive; needs heavy thinning; flowers showy, self-fertile; medium chilling requirement; leaf glands globose.

**Rebus 038.** Yellow-fleshed, melting, low-acid nectarine. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Spring Red x Big Top; tested as BO 96028038; introd. 2010. **Fruit:** large; 200 g; slightly oblate; bright red overcolor covering 90–100% yellow ground color, very little russetting, no cracking; flesh yellow with some anthocyanins; very firm, slow-melting (as Big Top nectarine), hangs well; clingstone, red near pit; very good flavor (low-acid type), aromatic; ripens mid July, 5 d after Redhaven in Bologna. **Tree:** regular; medium vigor; very productive; flowers showy, self-fertile; medium chilling requirement; leaf glands reniform.

**Rebus 195.** Yellow-fleshed, melting, semi-freestone nectarine. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Spring Red x Big Top; tested as BO 96028195; introd. 2010. **Fruit:** large; 200 g; slightly elongated; bright red blush covering 90–100% yellow ground color, very little russetting, no cracking; flesh yellow with some anthocyanins; very firm, slow-melting (as Big Top nectarine); hangs well; semi-freestone, red near pit; very good flavor (low-acid type), aromatic; ripens second half of July, 12 d after Redhaven in Bologna. **Tree:** regular; medium vigor; very productive; flowers showy, self-fertile; medium chilling requirement; leaf glands reniform.

**Paw Paw**

Kirk W. Pomper, Sheri B. Crabtree, and Jeremiah D. Lowe, College of Agriculture, Food Science, and Sustainable Systems, Kentucky State University, Frankfort, KY

**KSU 8-2** (KSU-Atwood™). Medium, fragrant pawpaw, with smooth, custard-textured flesh. **Origin:** Kentucky State University, Frankfort, KY, by K.W. Pomper, S.B. Crabtree, and J.D. Dove. Selected from population from O.P. seed collected by R. Neal Peterson in 1990 from a seedling tree at the Wye Research and Education Center (Queenstown, MD) which in turn originated from O.P. seed from BEF-49 (unknown origin) growing at the Blandy Experimental Farm (Boyce, VA); tested as MD90W062-3; introd. 2010. **Fruit:** 140 g, as large as 355 g; fleshy; percent seed 8% by weight; unique mango-banana-pineapple-like flavor, sweet, 27 ‘Brix; texture medium-firm, creamy, smooth; flesh color yellow to orange; overall fruit quality and quantity excellent. **Plant:** high yielding, 15–33 kg/tree; vigorous with strong natural right-angled scaffold branching, responds well to pruning; fruit thinning can increase fruit size.

**KSU-Atwood™,** See KSU 8-2.

**Peach**

Ksenija Gasic, Department of Environmental Horticulture, Clemson University, Clemson, SC

William R. Okie, USDA-ARS, Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA

**ASFPBF0492.** White-fleshed, melting, semi-clingstone peach. **Origin:** S.A.R.L. Argo Selection Fruits, Elne, France, by A. Maillard and L. Maillard. Maillardou (yellow nectarine) x Flataugust (white flat peach); tested as 03.24.43 PBPL; USPP 21,143; 6 July 2010. **Fruit:** large; homogeneous; round; luminous pink-red blush covers 100% of the fruit; flesh white with a star-shaped red pigmentation into and around the stone cavity; firm, very dense, crunchy, melting, juicy; semi-sweet, balanced taste; ripens 27 July–7 Aug., 4 d earlier than Maillarflat in Elne.. **Tree:** large, vigorous; semi-spread to semi-upright; very productive; flowers medium, showy, self-fertile; adapted to areas with 350–1200 h chilling requirement; leaf glands small, reniform.

**Bolero.** Yellow-fleshed, melting, freestone peach resistant to bacterial spot. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Cresthaven x Flamecrest; tested as BO 78007001; introd. 1995. **Fruit:** very large, 180–200 g; round, uniform; red blush covering 30–40% of yellow ground color; flesh yellow; firm, melting; freestone with red near pit; good flavor; ripens in late Aug., 32 d after Redhaven in Bologna. **Tree:** moderate vigorous spreading, highly productive; flowers non-showy, self-fertile; leaves and fruit resistant to bacterial spot (Xanthomonas arboricola pv. Pruni); medium chilling requirement; leaf glands reniform.

**Bonia.** Yellow, non-melting, clingstone peach. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Parentage unknown; tested
as BO 85084002; introd. 2002. **Fruit:** large, 170 g; round, symmetrical to slightly asymmetrical; no blush on yellow ground color; flesh yellow; firm, non-melting; clingstone, with no red near pit; good flavor; ripens in early July, 11 d before Redhaven in Bologna. **Tree:** vigorous upright-spreading, highly productive; flowers showy, self-fertile; medium chilling requirement; leaf glands reniform.

**Bordó.** Yellow-fleshed, melting, clingstone, early ripening peach. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Rich Lady x Maycrest; tested as BO 96025004; introd. 2008. **Fruit:** large, 150–170 g; round; red blush covering 90–100% over yellow ground color; flesh yellow, very firm, melting; clingstone, with red near pit; very good flavor, aromatic; ripens in late June, about 5 d after Maycrest in Bologna. **Tree:** medium-vigorous, spreading-upright, productive; flowers showy, self-fertile; medium chilling requirement; leaf glands reniform.

**Borgia.** Yellow-fleshed, non-melting, very early ripening peach for fresh market. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Maycrest O.P.; tested as BO 85139003; introd. 1994. **Fruit:** small, 65–70 g; round, symmetrical to slightly asymmetrical; red blush covering 80–90% of yellow ground color; flesh white; firm, non-melting; clingstone, with red near pit; good flavor; ripens in mid May, about 20 d before Maycrest in Bologna. **Tree:** medium-vigorous, spreading, highly productive; flowers showy, self-fertile; medium chilling requirement; leaf glands globose.

**Burpeachtwentyfour.** White-fleshed, clingstone peach. **Origin:** The Burchell Nursery Inc., Oakdale, CA, by J.K. Slaughter and T.H. Gerds. Queencrest x unknown white flesh flat peach; tested as J47.083; USPP 21,737; 1 Mar. 2011. **Fruit:** large; uniform; round; red blush covering 80–90% of yellow ground color; flesh white; firm, juicy, non-melting; sweet; low acidity; ripens 16–23 May in San Joaquin Valley, CA. **Tree:** large, vigorous; upright; productive; flowers showy; self-fertile; chilling requirement 650 h; leaf glands small, reniform.

**Flatpretty.** Yellow-fleshed, semi-clingstone flat peach. **Origin:** S.A.R.L. Argo Selection Fruits, Eline, France, by A. Maillard and L. Maillard. Maillardflat O.P.; tested as 01.10.64 PBPL; USPP 21,389; 19 Oct. 2010. **Fruit:** medium; flat, rounded; bright red overcolor covers 80–90% of yellow-orange ground color; flesh white with slight red pigmentation close to the stone; very firm, very dense; juicy; semi-sweet; ripens 30 June–11 July in Eline. **Tree:** medium-large; vigorous; semi-spread to semi-upright; very productive; flowers very large, showy, self-fertile; adapted to areas with 350–1200 h chilling requirement; leaf glands medium, reniform.

**FlatQueen.** White-fleshed, melting, semi-freestone flat peach. **Origin:** S.A.R.L. Argo Selection Fruits, Eline, France, by A. Maillard and L. Maillard. Maillardflat O.P.; tested as 01.24.88 PBPL; USPP 20,750; 16 Feb. 2010. **Fruit:** medium; uniform; flat, rounded; thick skin tenacious to the flesh; orange-red homogenous blush covers 80% of surface over yellow-orange ground color; flesh white with slight red pigmentation close to the stone; very firm, very dense, juicy; semi-sweet; ripens 25 Aug.–4 Sep., 27 d after Maillardflat in Eline. **Tree:** medium to large; moderately vigorous; half-standing; semi-spread; very productive; winter hardy; spring frost resistant; flowers large, showy, self-fertile; adapted to areas with 350–1200 h chilling requirement; leaf glands medium-large, reniform.

**Juliepretty.** Yellow-fleshed, very firm, clingstone peach with long shelf life. **Origin:** S.A.R.L. Argo Selection Fruits, Eline, France, by L. Maillard and A. Maillard. Maillargood O.P.; tested as 02.04.55 PJ; USPP 20,611; 29 Dec. 2009. **Fruit:** large; flat, uniform; round; red overcolor over 80–90% of orange-yellow ground color; flesh yellow with slight red pigmentation star-shaped around the stone; very firm, balanced taste, juicy; ripens 16–25 Aug., same time as O’Henry in Eline; long shelf life. **Tree:** medium to large; moderately vigorous; half-standing semi-spreading; winter hardy; spring frost resistant; flowers showy, self-fertile; chilling requirement 550 h; leaf glands reniform.

**KV00398.** Yellow-fleshed, melting, freestone peach. **Origin:** USDA-ARS, AFRS Kearneysville, WV, by R. Scorza and W.R. Okie. By’96P3480 O.P. [Blazeprince x BY’90P2932 (F3 of Flavortop x Fla WL-1)]; USPP 21,378; 12 Oct. 2010. **Fruit:** large; uniform; red overcolor covering 80% of yellow-orange ground color; flesh yellow; firm, melting; sweet, mildly acid; ripens early August in Kearneysville. **Tree:** large; vigorous; spreading; medium-dense; flowers showy, self-fertile; leaf glands reniform.

**KV981175.** Yellow-fleshed, melting, freestone peach. **Origin:** USDA-ARS, AFRS Kearneysville, WV, by R. Scorza. Bounty x Crimson Rocket; USPP 21,379; 12 Oct. 2010. **Fruit:** large; uniform; red-purple overcolor covering 80% of yellow ground color; flesh yellow-orange with small amount of red around stone; firm, melting; freestone; sweet with good balance of acidity; ripens mid August in Kearneysville. **Tree:** vigorous; upright; medium-dense to dense; productive; flowers showy, self-fertile; leaf glands reniform.

**Lucrezia.** Yellow-fleshed, melting, freestone, very early ripening peach. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Maycrest O.P.; tested as BO 85139004; introd. 1994. **Fruit:** small, 65–70 g; round, symmetrical to slightly asymmetrical; red blush covering 50–70% over yellow ground color; flesh yellow; firm, non-melting; clingstone, with red near pit; good flavor; ripens 16–23 d before Maycrest in Bologna. **Tree:** medium-vigorous, spreading, highly productive; flowers showy, self-fertile; medium chilling requirement; leaf glands globose.

**Moscasto Largo.** Yellow, firm, mid-chilling requirement, freestone peach. **Origin:** Ministry of Agriculture & National Agricultural Research Institute of Uruguay INIA, by R. De Lucca, R. Zeballo, J. Soria, and J. Pisano. Parentage involved Pavia Manteca, Pavia Moscatel, EarliGrande and Flordaking; introd. 2012; PVR applied for. **Fruit:** medium to large; long-shaped; 60% red overcolor, attractive, short to medium fuzz, resembling Elberta; flesh firm, very good flavor and aroma; no tendency to cracking; ripens 30 Jan.–5 Feb., 46 d after Flavorcrest in Las Brujas. **Tree:** medium vigorous; spreading; productive; flowers showy; self-fertile; chilling requirement 1050 h (Utah model); medium sensitivity to bacterial spot.

**Nadia.** Yellow-fleshed, melting, freestone peach, resistant to brown rot. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Suncrest x IF 7030087; tested as BO 82015079; introd. 1993. **Fruit:** very large, 200 g; round; red blush covering 60% of yellow ground color; flesh yellow; firm, melting; freestone with red near pit; very good flavor; ripens late August, about 40 d after Redhaven in Bologna. **Tree:** medium; vigorous; spreading; productive; flowers showy, self-fertile; fruit resistant to brown rot (*Monilinia laxa* spp.); medium chilling requirement; leaf glands reniform.

**Rosella.** White-fleshed, melting, clingstone, very early ripening peach. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Rubiette x Spring Lady; tested as BO 88036630; introd. 2002. **Fruit:** small, 75–80 g; round; symmetrical to slightly asymmetrical; red blush covering 80% of white ground color; flesh white; firm, melting; clingstone, with no red near pit; good flavor; ripens late May, about 15 d before Maycrest in Bologna. **Tree:** medium vigor; semi-spreading, highly productive; flowers showy, self-fertile; medium chilling requirement; leaf glands globose.

**Rubia.** White-fleshed, melting peach. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. (Redtop x Paola Cavicchi Precoco) x Firered; tested as BO 90004061; introd. 2002. **Fruit:** large, 200 g; round, symmetrical to slightly asymmetrical; red blush covering 65–70% over white ground color; flesh white; firm, melting;
fresource, with red near pit; good flavor, aromatic; ripens late July, about 8 d after Redhaven in Bologna. **Tree:** vigorous, semi-spreading, highly productive; flowers showy, self-fertile; medium chilling requirement; leaf glands globose.

**Rubisco.** White-fleshed, melting freestone peach. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. (Redlop x Paola Cavicchi Precoco) x Firered; tested as BO 9004057; introd. 2002. **Fruit:** large, 200 g; round, symmetrical to slightly asymmetrical; red blush covering 40–50% of white ground color; flesh white; firm, melting; freestone, with red near pit; good flavor, aromatic; ripens in mid August, about 35 d after Redhaven in Bologna. **Tree:** vigorous, semi-spreading, highly productive; flowers showy, self-fertile; medium chilling requirement; leaf glands reniform.

**Sauze Pride.** Yellow-fleshed, freestone flat peach. **Origin:** Modesto, CA by G.N. Zaiger, L.M. Gardner, and G.G. Zaiger. **Tree:** large; flat; orange-red blush; flesh yellow; firm; mild, sweet; sub-acid; ripens 16–22 July in Modesto, CA. **Tree:** vigorous; upright; productive; flowers non-showy, self-fertile; leaf glands reniform.

**Soleada.** Yellow-fleshed, melting, freestone peach with fruit resistant to brown rot and bacterial spot. **Origin:** Universities of Bologna and Milan, Italy, by D. Bassi. Cresthaven x self; tested as BO 84025024; introd. 2002. **Fruit:** very large (200 g); round; red blush covering 40–50% over yellow ground color; flesh yellow; firm, melting; freestone with no red near pit; very good flavor; resistant to brown rot and bacterial spot; ripens in mid August, about 30 d after Redhaven in Bologna. **Tree:** medium vigor; spreading; productive; flowers non-showy, self-fertile; medium chilling; leaf glands reniform.

**Sunnirich.** Yellow-fleshed, clingstone, low-acid peach. **Origin:** Modesto, CA by G.N. Zaiger, L.M. Gardner, and G.G. Zaiger. 207LF85 x 505-13 (peento peach); tested as 55ZA18; USPP 20,639; 12 Jan. 2010. **Fruit:** blush covering 40–50% of white ground color; flesh white; firm, semi-sweet; ripens very evenly, homogenously, slowly; long shelf life; grouped maturity, only 2 harvests in 10 d; ripens 13–20 June in Elne. **Tree:** large; very vigorous; semi-spreading to semi-upright; very productive; flowers medium-large, showy, self-fertile; adapted to areas with 350–1200 h chilling requirement; leaf glands medium, globose.

**Sweetstar.** White-fleshed, melting, clingstone peach with long shelf life. **Origin:** S.A.R.L. Argo Selection Fruits, Elne, France, by A. Maillard and L. Maillard. ASF 9805 O.P. [Julie x Zaitabo]; tested as 02.09.94 PB; USPP 21,145; 6 July 2010. **Fruit:** large-very large; uniform; round; homogenous and luminous purple-red blush covers 80–90% of red ground color; flesh white with red pigmentation around the stone; very firm, very dense, crunchy, melting; semi-sweet; ripens very evenly, homogenously, slowly; long shelf life; grouped maturity, only 2 harvests in 10 d; ripens 7–16 Aug., 2–3 d after Nectarexquise in Elne. **Tree:** large; very vigorous; semi-spreading to semi-upright; very productive; flowers medium-large, showy, self-fertile; adapted to areas with 350–1200 h chilling requirement; leaf glands medium, reniform.

**UF ONE.** Yellow-fleshed, semi-clingstone peach. **Origin:** University of Florida, Gainesville and Florida Foundation Seed Producers Inc., Greenwood, FL, by J. Chaparro and W.B. Sherman. Fla. 90-50cn O.P.; tested as Fla. 97-30c; USPP 21,607; 4 Jan. 2011. **Fruit:** large; uniform, slightly oval; bright red blush covers 40% of yellow ground color; flesh yellow with no red at the pit; firm, juicy, melting when fully ripe; moderately sweet, slightly acid; ripens early May, 8 d after UFBeauty at Gainesville. **Tree:** medium; moderately vigorous; semi-spreading; very productive; high leaf and fruit resistance to bacterial spot; flowers showy, self-fertile; chilling requirement 150 h; leaf glands globose.

**UFGlo.** White-fleshed, non-melting, clingstone peach. **Origin:** University of Florida, Gainesville and Florida Foundation Seed Producers Inc., Greenwood, FL, by J. Chaparro and W.B. Sherman. Fla. 97-47cn x bulked pollen from three unselected white-fleshed non-melting peaches; USPP 21,837; 5 Apr. 2011. **Fruit:** medium-large; uniform, round; red blush covers 70–90% of cream ground color; flesh white with no red around the pit; firm, non-melting, juicy; moderately sweet, slightly acid; ripens 11–18 May, 10–14 day before UFShepherd at Gainesville. **Tree:** medium; moderately vigorous; semi-spreading; flowers showy, self-fertile; chilling requirement 400 h; leaf glands reniform.

**PEACH ROOTSTOCK**

**Thomas G. Beckman, USDA-ARS Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA**

**MP-29.** A clonal plum x peach interspecific hybrid rootstock for peach. **Origin:** USDA-ARS, Byron, GA, and University of Florida by T.G. Beckman, J.X. Chaparro, and W.B. Sherman. Edible Sloe Seedling x UFBeauty; tested as SL004 peach rootstock selection; selected 1995; tested as MP-29; introd. 2011. USPP applied for. **Plant:** readily propagated via softwood or hardwood cuttings and tissue culture; un budded tree has moderate vigor, semi-spreading form; leaves are red with morphology intermediate between the plum and peach parents; flowers rare and incomplete, reproductively sterile; vegetative budbreak coincides with peach cultivars requiring ca. 750 h of chilling below 7 °C at Byron. **Rootstock performance:** significantly lower vigor than trees budded on peach seedling rootstocks, ca. 70% the size of trees on Guardian; yield efficiency equal to or better than trees on Guardian; fruit size similar to trees on Guardian; significantly more resistant to Armillaria (A. tabescens) root rot than Sharpe plum.
rootstock or typical peach seedling rootstocks such as Guardian; resistance to Peach Tree Short Life similar to that of Guardian; resistant to several species of root-knot nematodes including Meloidogyne incognita and M. floridensis; tests of graft compatibility with other Prunus species have been initiated.


PERSIAN WALNUT

Charles A. Leslie, Walnut Improvement Program, University of California, Davis, CA

Fredrick. A walnut that harvests shortly after Payne with high yield and less blight. Origin: Stockton, CA, by F. Minazzi. Payne O.P.; selected 1980; introd. 2002. USPP 14,236; 14 Oct. 2003. Nut: 11.4 g; smooth, ovate; light color; 54% kernel, suitable for use in-shell; Kernel: 6.6 g; easily removed in halves; mostly extra light color. Tree: vigorous; moderately upright structure; bears on terminals; protandrous; yield high; harvests 1 week after Payne; less blight (Xanthomonas arboricola pv. juglandis) than Payne.

Ivanhoe. A very early harvesting walnut with extra-light kernel color. Origin: University of California-Davis, by G. McGranahan and C. Leslie. UC67-13 x Chico; crossed 1995; selected 2001; tested as UC95-011-14; introd. 2010. USPP 21,718; 22 Feb. 2011. Nut: 13.5 g; smooth, oval; 57% kernel; seals sometimes weak. Kernel: 7.7 g; easily removed in halves; high proportion of extra-light color. Tree: vigorous moderate to low; bears on terminals and laterals; precocious; protogynous; yield high; harvest date very early, similar to Serr and 1 mo before Chandler; susceptible to blight.

PLUM

David W. Ramming, USDA-ARS, Crop Diseases, Pests and Genetics, San Joaquin Valley Agricultural Sciences Center, Parlier, CA


Black Garabedian. An early, dark red skin, yellow flesh, Japanese plum. Origin: Fresno, CA, by S. Arias. Santa Rosa x El Dorado. USPP 21,557; 7 Dec. 2010. Fruit: medium, 68 mm diameter; round; skin dark red, glabrous; flesh yellow, semi-freestone; ripens 3–14 June; 7–10 d before Santa Rosa. Tree: medium; upright; productive, regular producer; anthers nugget bronze yellow; petals white; blooms 10–28 Feb. in Fresno, CA; pollinators Showtime and Santa Rosa.

Blackred IV. An early to mid-season, dark-blackish red skin, red to orange flesh, interspecific plum. Origin: Le Grand, CA, by L.G. Bradford. Purple Majesty x unknown apricot and interspecific plum-apricot pollen; crossed 2001; selected 2004. USPP 20,832; 16 Mar. 2010. Fruit: medium to large, 70 mm diameter, 147 g; olate; skin dark blackish-red, glabrous; flesh red to orange; SS 20–24%; clingstone; ripens 23 Aug.–8 Sep. Tree: medium; moderately vigorous; upright; very productive, regular producer; self-inferfertile; anthers light orange-yellow; petals white; blooms 22 Feb.–2 Mar. in Le Grand, CA, with Ambra.

Blackred VIII. A mid-season, blackish-red skin, red to orange flesh, interspecific plum. Origin: Le Grand, CA, by L.G. Bradford. 19P442 x unknown apricot and interspecific plum-apricot pollen; crossed 2001; selected 2004. USPP 20,863; 23 Mar. 2010. Fruit: large, 73 mm diameter, 193 g; olate; skin blackish-red, glabrous; flesh red to orange; SS 20–24%; clingstone; ripens 23 Aug.–8 Sep. Tree: medium; moderately vigorous; upright; very productive, regular producer; self-inferfertile; anthers orange-yellow; petals white; blooms 22 Feb.–2 Mar. in Le Grand, CA, with Ambra.

Blackred XI. A late-season, black skin, red flesh, interspecific plum. Origin: Le Grand, CA, by L.G. Bradford. 42P1156 x unknown apricot and interspecific plum-apricot pollen; crossed 2003; selected 2006. USPP 21,938; 31 May 2011. Fruit: large, 70 mm diameter, 173 g; round; skin black, glabrous; flesh red; SS 23%; clingstone; ripens 7–21 Sep., 14 d before Blackred XII. Tree: medium; vigorous; upright; very productive, regular producer; self-inferfertile; anthers orange-yellow; petals white; blooms 22 Feb.–2 Mar. in Le Grand, CA, 4 d before Santa Rosa.

Blackred XII. A late-ripening, black skin, red to orange flesh, interspecific plum. Origin: Le Grand, CA, by L.G. Bradford. 42P1156 x unknown apricot and interspecific plum-apricot pollen; crossed 2003; selected 2006. USPP 20,892; 30 Mar. 2010. Fruit: medium-large, 67 mm diameter, 147 g; round; skin black, glabrous; flesh red to orange; SS 23%; clingstone; ripens 27 Sep.–10 Oct., 30 d after Plumsweet V. Tree: medium to large; moderately vigorous; upright; medium productive, regular producer; self-inferfertile; anthers orange-yellow; petals white; blooms 26 Feb.–7 Mar. in Modesto, CA; chilling requirement 900 h.

Fallette. A very late-ripening, red skin, yellow flesh, Japanese plum. Origin: Modesto, CA, by G.N. Zaiger, L.M. Gardner, and G.G. Zaiger. 297LC176 O.P.; selected 1993. USPP 20,972; 4 May 2010. Fruit: large, 62 mm diameter, 168 g; round to slightly elongated; skin red, glabrous; flesh yellow; SS 17.2%; clingstone; ripens 28 Oct.–5 Nov. Tree: large; vigorous; upright; productive, regular producer; self-inferfertile; anthers yellow; petals white; blooms 26 Feb.–7 Mar. in Modesto, CA; chilling requirement 200 h.

Plumred III. An early ripening, very dark red skin, dark red flesh, interspecific plum. Origin: Le Grand, CA, by L.G. Bradford. Purple Majesty x unknown apricot and interspecific plum-apricot pollen; crossed 2001; selected 2004. USPP 20,864; 23 Mar. 2010. Fruit: large, 70 mm diameter, 181 g; olate; skin very dark red, glabrous; flesh dark red; SS 19%; semi-freestone; ripens 20–30 June. Tree: medium; moderately vigorous; spreading; very productive, regular producer; self-inferfertile; anthers deep orange-yellow; petals white; blooms 24 Feb.–2 Mar. in Le Grand, CA, 3 d before Santa Rosa.

Suplumforty. A mid-season, dark purple skin, red flesh, Japanese plum. Origin: Sun World International, LLC, Bakersfield, CA, by T. Bacon. Suplumfortyfour x unknown plum; crossed 2002; selected 2004; tested as PL453RB. USPP 21,865; 12 Apr. 2011. Fruit: large, 64 mm diameter, 160 g; round; skin purple, glabrous; flesh amber; SS 20%; semi-free; ripens 1–5 Sept., 20 d before Angeleno. Tree: medium; moderately vigorous; semi- upright; very productive, regular producer; anthers grey-orange; petals white; blooms 26 Feb.–1 Mar. in Wasco, CA.

Suplumthirtynine. A very late ripening, purple skin, amber flesh, Japanese plum. Origin: Sun World International, LLC, Bakersfield, CA, by D.W. Cain and T. Bacon. 91P-024 x 92P-023; crossed 1998; selected 2002; tested as PL186YB. USPP 21,865; 12 Apr. 2011. Fruit: large, 64 mm diameter, 160 g; round; skin purple, glabrous; anthers grey-orange; petals white; blooms 26 Feb.–1 Mar. in Wasco, CA.


PLUM ROOTSTOCK

Replantpac (Rootpac® R). A clonal plum x almond hybrid rootstock for Japanese plum. Origin: Agromillora Catalana, Barcelona, Spain, by J. Pinochet. Prunus cerasifera x P. amygdalus (both parents of unknown origin); selected 1994; tested as PAC 941; introd. 2010; USPP 20,865; 23 Mar. 2010. Fruit: medium, 64 mm diameter, 147 g; round; skin dark-purple, glabrous; flesh yellow; SS 20%; clingstone; ripens 28 Aug.–10 Sep., 10 d before Angeleno. Tree: medium; moderately vigorous; semi- upright; very productive, regular producer; self-infertile; anthers orange-yellow; petals white; blooms 1–6 Mar. in Wasco, CA.

Rambutan

Rambutan. A mid-season, dark purple skin, red flesh, Japanese plum. Origin: Sun World International, LLC, Bakersfield, CA, by T. Bacon. Suplumfortyfour x unknown plum; crossed 2002; selected 2004; tested as PL453RB. USPP 21,865; 12 Apr. 2011. Fruit: large, 66 mm diameter, 150 g; round; skin dark-purple, glabrous; flesh red; SS 16%; semi-free; ripens 1–15 July, 7 d after Blackamber. Tree: medium; moderately vigorous; semi-upright; very productive, regular producer; anthers grey-orange; petals white; blooms 26 Feb.–1 Mar. in Wasco, CA.

Rapberry

Rapberry. A late-ripening, dark purple skin, red flesh, Japanese plum. Origin: Sun World International, LLC, Bakersfield, CA, by T. Bacon. Suplumfortyfour x unknown plum; crossed 2002; selected 2004; tested as PL453RB. USPP 21,865; 12 Apr. 2011. Fruit: large, 66 mm diameter, 150 g; round; skin dark-purple, glabrous; flesh red; SS 16%; semi-free; ripens 1–15 July, 7 d after Blackamber. Tree: medium; moderately vigorous; semi-upright; very productive, regular producer; anthers grey-orange; petals white; blooms 26 Feb.–1 Mar. in Wasco, CA.

Ripto. A mid-season, dark purple skin, red flesh, Japanese plum. Origin: Sun World International, LLC, Bakersfield, CA, by T. Bacon. Suplumfortyfour x unknown plum; crossed 2002; selected 2004; tested as PL453RB. USPP 21,865; 12 Apr. 2011. Fruit: large, 66 mm diameter, 150 g; round; skin dark-purple, glabrous; flesh red; SS 16%; semi-free; ripens 1–15 July, 7 d after Blackamber. Tree: medium; moderately vigorous; semi-upright; very productive, regular producer; anthers grey-orange; petals white; blooms 26 Feb.–1 Mar. in Wasco, CA.
flavor; good firmness; suited to hand picking. **Plant:** upright canes; strong vigor.

**Glen Cally.** A high-yielding floricanes-fruiting red raspberry, with high tolerance to *Phytophthora* root rot, for processing. **Origin:** James Hutton Institute, Invergowrie, Scotland, by S.N. Jennings. SCRI 9422C-4 x SCRI 9434B-1; crossed 1999; selected 2002; tested as SCRI 99111A1; introd. 2008. EU PVR 30309; 6 Jun. 2011. **Fruit:** medium-red; medium, 4 g; round; mid-season ripening, with Glen Ample; flavor has raspberry aroma but slightly tart; firm fruit is easily removed from receptacle; recommended for machine harvesting for processing. **Plant:** vigorous cane, spine-free, upright; gene $A_{10}$ gives resistance to biotypes one through four of the European large raspberry aphid (*A. idaei*); susceptible to RBDV; very high field tolerance to root rot.

**Glen Eriech.** A productive floricanes-fruiting red raspberry, with high tolerance to *Phytophthora* root rot, for processing. **Origin:** James Hutton Institute, Invergowrie, Scotland, by S.N. Jennings. SCRI 9422C-4 x SCRI 9434B-1; crossed 1999; selected 2002; tested as SCRI 99111B2; introd. 2008. EU PVR 30310; 6 Jun. 2011. **Fruit:** medium red; medium, 4.5 g; round-conical; good raspberry aroma but very tart; mid-season ripening, with Glen Ample; easily removed from receptacle; recommended for machine harvesting; high proportion of firm fruit suitable for individually quick frozen (IQF); more productive than Glen Ample. **Plant:** good vigor; spine-free; fruit well presented on strong laterals; gene $A_{10}$ gives resistance to biotypes one through four of the European large raspberry aphid; slow to infect with RBDV; very high field tolerance to root rot.

**Lagorai.** A mid-late season, floricanes-fruiting red raspberry producing high yields of good quality fruit suited to fresh market. **Origin:** Sant’Orsola Cooperative, Val di Cembra, Italy; by A. Telch. Crossed 2003; selected 2005; tested as T44; introd. 2007. EU PVR applied for. **Fruit:** bright red; large; shape comparable to Tulameen; good flavor; good firmness; good shelf-life; suited to hand picking. **Plant:** upright canes; very strong vigor; adapted to medium-high winter chilling requirement environments such as north Italy; very high productivity.

**Pacific Deluxe.** A high-yielding, mid-season, primocane-fruiting red raspberry suited for fresh market. **Origin:** Pacific Berry Breeding LLC, Salinas, CA, by M. Aguas, T. Am Rhein and J. Lopez-Medina. 401 (proprietary) x 433 (proprietary); selected 2005; introd. 2009. USPP 21,074; 22 June 2010. **Fruit:** bright red; large; broad-conic; uniform drupelets; firm; high gloss; slightly acid, medium soluble solids; detaches easily from receptacle; excellent postharvest performance, darkens slightly after cooling. **Plant:** medium vigor; compact growth habit; low spine density; balanced crop on primocanes and floricanes; very good field tolerance to *F. rubi*; low susceptibility to cane and leaf diseases; adapted to low-chilling requirement environments.

**Vajolet.** An early, floricanes-fruiting red raspberry producing high yields of good quality fruit suited to fresh market. **Origin:** Sant’Orsola, Val di Cembra Cooperative, Italy; by A. Telch. Crossed 2003; selected 2005; tested as T33; introd. 2009. EU PVR applied for. **Fruit:** bright red; large; shape comparable to Tulameen; good flavor; medium firmness; good shelf-life; suited to hand picking. **Plant:** upright canes; very strong vigor; adapted to low chilling requirement environments such as south Italy; very high productivity.

**Vintage.** A high-yielding, glossy, bright-colored, primocane-fruiting raspberry for fresh market with excellent flavor. **Origin:** USDA-ARS, Corvallis, OR, by C.E. Finn, B.C. Strik, and R.R. Martin. Isabel O.P.; crossed 2001; selected 2004; tested as ORUS 2786-5; introd. 2011. USPP applied for. **Fruit:** bright red; large; round; glossy; mid-season ripening, ~14 d before Heritage; flavor excellent, SS 12.2%; titratable acidity low, 12.8% citric acid; easily removed from receptacle; yield similar or higher than Heritage. **Plant:** primocanes late emerging; vigorous but less vigorous than Heritage; canes per hill slightly fewer or similar to Heritage; prickles less dense and half the size of those for Heritage; susceptible to RBDV and root rot.

**STRAWBERRY**

**Kim S. Lewers, USDA-ARS, Genetic Improvement of Fruits and Vegetables Laboratory, Beltsville, MD**

**Donna.** Partially remontant strawberry adapted to low-tunnel protected cultivation. **Origin:** Le Barp, France, by A. Pierron-Darbonne. 98.05.17 x 98.16.34. USPP 20,648; 19 Jan. 2010. **Fruit:** glossy red, Royal Horticultural Society (R.H.S.). 43A-43B; medium, 20–21 g; uniform conical to wedged-shaped; flesh firm, orange-red, R.H.S. 34A-34C; 7.2% Brix; mid-sized reflexed calyx; achenes level with surface; early. **Plant:** medium to strong vigor, high stolon number, 15–20 stolons/plant; moderate to high yield, 1,160 g/plant; flat-globose, medium density foliage; flowers level to above foliage, semi-erect fruiting trusses; tolerant to powdery mildew (*Sphaerotheca macularia*).

**DrisStrawEight.** Partially remontant strawberry adapted to south-central coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by M.D. Ferguson. Driscoll Ojai x Driscoll Agoura; selected 2005. USPP 20,735; 9 Feb. 2010. **Fruit:** red, R.H.S. 45B; large, 26.5 g; uniform conical to almost cylindrical; flesh firm, red and white, R.H.S. 41B and R.H.S. 155A; somewhat sweet, moderately tart; large reflexed calyx; achenes below surface; early. **Plant:** medium vigor, two crowns/plant, medium stolon number, 44 daughter plants; moderate yield, 529 g/plant; globose, medium-density foliage; flowers above foliage, prostrate fruiting trusses; moderately resistant to two-spotted spider mite (*Tetranychus urticae*), powdery mildew, and *Strawberry mottle virus* (SMV); moderately susceptible to botrytis fruit rot (*Botrytis cinerea*) and angular leaf spot (*Xanthomonas fragariae*); susceptible to lygus bug (*Lygus hesperus*) and verticillium wilt (*Verticillium dahliae*); moderately tolerant of high temperature, high pH, high soil salt levels, and water logging.

**DrisStrawEleven.** Fully everbearing strawberry adapted to central and southern coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by B.D. Mowrey, J.F. Coss, M.P. Madesko, P.J. Stewart, M.P. Wilson, and M.D. Ferguson. 122J81 x 111H69; selected 2004; USPP 20,731; 9 Feb. 2010. **Fruit:** glossy, dark red, R.H.S. 46A; medium, 24.5 g; uniform conical; flesh firm, red and white, R.H.S. 44B and R.H.S. 155C; sweet, moderately tart; large spreading calyx; achenes level with surface; early-mid. **Plant:** very vigorous, three crowns/plant, medium stolon number, 42 daughter plants; high yield, 1,400 g/plant; upright, open to medium density; flowers below foliage, semi-erect fruiting trusses; moderately resistant to SMV; moderately susceptible to botrytis fruit rot and angular leaf spot; susceptible to two-spotted spider mite, powdery mildew and verticillium wilt.

**DrisStrawFifteen.** Fully everbearing strawberry adapted to central coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by P.J. Stewart, M.P. Madesko, J.F. Coss, and B.D. Mowrey. Driscoll Lanai x Driscoll 383J181; selected 2004; USPP 21,762; 8 Mar. 2011. **Fruit:** dark red, R.H.S. 46A; medium, 21.6 g; conical; flesh firm, dark red and white, R.H.S. 46B and R.H.S. 155B; sweet, moderately tart; spreading calyx of variable size; achenes below surface; early-mid. **Plant:** medium vigor, two crowns/plant, very stoloniferous, 40 daughter plants; high yield, 1,513 g/plant; flat-globose, open; flowers below foliage, prostrate fruiting trusses; moderately resistant to two-spotted spider mite; moderately susceptible to powdery mildew and botrytis fruit rot; moderately tolerant of rain on fruit.
DrisStrawFourteen. Partially everbearing strawberry adapted to central coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by P.J. Stewart, M.P. Madesko, J.F. Coss, and B.D. Mowrey. 159K312 x 128K296; selected 2005; USPP 22,040; 26 July 2011. **Fruit:** dark red, R.H.S. 46B; medium, 29.1 g; uniform conical; flesh red and white, R.H.S. 41A and R.H.S. 155C; somewhat sweet, moderately tart; medium to large reflexed calyx; achenes insertion varies from above to below surface; early-mid. **Plant:** medium vigor, three crowns/plant, medium stolon number, over 30 daughter plants; high yield, 1,463 g/plant; globose, medium density foliage; flowers level with foliage, prostate fruiting trusses; moderately resistant to botrytis fruit rot, powdery mildew and verticillium wilt; tolerant of rain on fruit.

DrisStrawNine. Fully everbearing strawberry adapted to central coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by B.D. Mowrey, P.J. Stewart, M.P. Madesko, and J.F. Coss. 94J283 x 112H25; selected 2004; USPP 20,733; 23 Feb. 2010. **Fruit:** dark red, R.H.S. 46A; medium, 23.1 g; uniform conical; flesh firm, red and white, R.H.S. 46B and R.H.S. 155D; somewhat sweet, moderately tart; large spreading calyx; achenes level with surface; early-mid. **Plant:** weak vigor, three crowns/plant, medium stolon number, 35 daughter plants; high yield, 1,505 g/plant; upright, medium density foliage; flowers above foliage, semi-erect fruiting trusses; moderately resistant to SMV; moderately susceptible to two-spotted spider mite, powdery mildew, and angular leaf spot; susceptible to botrytis fruit rot and powdery mildew.

DrisStrawSeven. Short-day strawberry adapted to winter production in Florida. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by K.L. Gilford, B.D. Mowrey, P.J. Stewart, E.J. Pullen, and J. Rodriguez-Alcazar. 77G1 x Driscoll Camarillo; selected 2003. USPP 20,922; 6 Apr. 2010. **Fruit:** glossy dark red, R.H.S. 46A; large, 26.7 g; uniform conical; flesh red, R.H.S. 40B; sweet, mildly acid; medium to large, spreading calyx; achenes level with surface; mid-season. **Plant:** medium vigor, three crowns/plant, very stoloniferous, 55 daughter plants; moderate yield, 402 g/plant; flat-globose, medium density foliage; flowers above foliage, erect to semi-erect fruited trusses; resistant to powdery mildew, susceptible to angular leaf spot.

DrisStrawSeventeen. Fully everbearing strawberry adapted to southern coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by M.D. Ferguson. 13H177 x 119H176; selected 2006. USPP 22,218; 1 Nov. 2011. **Fruit:** glossy dark red, R.H.S. 46B; very large, 28.4 g; uniform wedge-shaped; flesh orange-red and white, R.H.S. 30A and R.H.S. 155D; somewhat sweet, moderately tart; mid-sized reflexed calyx; achenes level with surface; mid-season. **Plant:** very vigorous, three crowns/plant, few stolons, 34 daughter plants; low to moderate yield, 486 g/plant; globose to upright, dense foliage; flowers below foliage, prostate fruiting trusses; moderately resistant to two-spotted spider mite, cyclamen mite (Tarsenomus pallidus), strawberry foliar nematode (Aphelenchoides fragariae), root lesion nematode (Pratylenchus penetrans), stem eelworm (Ditylenchus dipsace), strawberry blossom weevil (Anthonomus rubi), aphids (Aphis spp.), and lygus bug; moderately susceptible to botrytis fruit rot and powdery mildew; moderately tolerant of wind.

DrisStrawSix. Short-day strawberry adapted to winter production in Florida. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by K.L. Gilford, P.J. Stewart, and E.J. Pullen. 74G14 x 6F-158; selected 2002. USPP 20,701; 2 Feb. 2010. **Fruit:** glossy red, R.H.S. 46B; medium to large, 29.9 g; uniform conical; flesh red, R.H.S. 43B; sweet, moderately tart; large spreading to reflexed calyx; achenes level with surface; early. **Plant:** medium to strong vigor, four crowns/plant, very stoloniferous, 50 daughter plants; moderate yield, 568 g/plant; flat-globose, medium density foliage; flowers above foliage, prostate fruited trusses; susceptible to angular leaf spot.

DrisStrawSixteen. Short-day strawberry adapted to winter production in Spain. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by M.D. Ferguson. El Dorado x 12J277; selected 2004; USPP 22,247; 15 Nov. 2011. **Fruit:** red, R.H.S. 45A; very large, 39 g; conical and variable; flesh red, R.H.S. 45C; somewhat sweet, moderately tart; large spreading calyx; achenes level with surface; mid-season. **Plant:** very vigorous, three crowns/plant, few stolons, 25–30 daughter plants; high yield, 900 g/plant; globose, medium density foliage; flowers above foliage, erect fruited trusses; moderately susceptible to botrytis fruit rot and powdery mildew.

DrisStrawTen. Fully everbearing strawberry adapted to central coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by B.D. Mowrey, P.J. Stewart, M.P. Madesko, and J.F. Coss. 94J283 x 112H25; selected in Monterey, CA, 2004; USPP 20,775; 10 Feb. 2010. **Fruit:** dark red, R.H.S. 45A; medium, 23.1 g; uniform conical; flesh red and light red, R.H.S. 43B and R.H.S. 49D; somewhat sweet, moderately tart; mid-sized spreading calyx; achenes level with surface; early-mid. **Plant:** medium to weak vigor, three crowns/plant, medium stolon number, 35 daughter plants; high yield, 1,769 g/plant; globose, medium to dense foliage; flowers above foliage, erect fruited trusses; moderately resistant to powdery mildew, verticillium wilt and SMV; moderately susceptible to two-spotted spider mite and angular leaf spot; susceptible to botrytis fruit rot.

DrisStrawThirteen. Partially remontant strawberry adapted to southern coastal California. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by M.D. Ferguson and T.C. Moran. 2K297 x Driscoll Ojai; selected 2005; USPP 21,559; 7 Dec. 2010. **Fruit:** dark red, R.H.S. 46A; large, 28.7 g; uniform conical to bi-conical; flesh somewhat soft, dark red and white, R.H.S. 45A and R.H.S. 155D; sweet, moderately tart; large reflexed calyx; achenes level with surface; mid-season. **Plant:** very vigorous, three crowns/plant, medium stolon number, over 50 daughter plants; moderate yield, 474 g/plant; globose, medium density foliage; flowers level to above foliage, prostate fruited trusses; resistant to powdery mildew; moderately resistant to lygus bug and SMV; moderately susceptible to botrytis fruit rot, verticillium wilt, and angular leaf spot; tolerant of drought, high temperatures, wind, high pH, high salt levels, and water logging.

DrisStrawTwelve. Partially remontant strawberry adapted to winter production in Florida. **Origin:** Driscoll Strawberry Associates, Inc., Watsonville, CA, by K.L. Gilford, E.J. Pullen, B.D. Mowrey, and P.J. Stewart. Driscoll Sanibel x Driscoll Bonaire; selected 2004; USPP 21,538; 30 Nov. 2010. **Fruit:** dark purple-red, R.H.S. 185A; very large, 39 g; uniform conical to almost cylindrical; flesh firm, red and white, R.H.S. 42B and R.H.S. 155B; sweet, mild; large spreading to reflexed calyx; achenes level below surface; early-mid. **Plant:** medium to strong vigor, three crowns/plant, medium stolon number, 30 daughter plants; moderate to high yield, 604 g/plant; flat, medium to dense foliage; flowers below foliage, prostate fruited trusses; moderately resistant to botrytis fruit rot, powdery mildew, and angular leaf spot; tolerant of high temperatures.

Glory. Fully everbearing strawberry adapted to south-central coastal California. **Origin:** Plant Sciences, Inc., Watsonville, CA by S.M. Ackerman, S.D. Nelson, and M.D. Nelson. PS-1269 x PS-2286; crossed 1997; selected 1999; USPP 20,308, 15 Sept. 2009. **Fruit:** red to orange-red, Munsell 7.5R 3/12 to 4/10; medium, 21.4 g; variable shape from cylindrical, conical, cordiform to wedged; flesh red, Munsell 7.5R 4/10 to 4/12; good flavor, 8.4% Brix; large spreading to reflexed calyx; achenes level to below surface; early-mid. **Plant:** medium vigor, medium stolon number, 8.3 stolons/plant; low to moderate yield, 511 g/plant; globose, open to medium density; flowers level with foliage, prostate fruited trusses; moderately resistant to botrytis fruit rot, powdery mildew, and angular leaf spot; susceptible to lygus bug.
Herriot. Short day strawberry adapted to perennial matted row production in temperate climates. Origin: New York State Agricultural Experiment Station–Geneva, NY and Cornell University, by C.A. Weber. NYUS299 x Winona; crossed 1997; selected 1999; tested as NY99-21; introd. 2011. USPP applied for. Fruit: large; wide conical; firmness moderate; bright red; flavor good; mid-season, ripens with Jewel. Plant: vigorous and spreading; high runner production; productive; resistant to powdery mildew, tolerant of replant diseases.

Laurel. Short-day strawberry adapted to eastern Canada. Origin: Agriculture and Agri-Food Canada, Atlantic Food and Horticulture Research Centre, Kentville, Nova Scotia by A.R. Jamieson. Allstar x Cavendish; crossed 1991; selected 1993; tested as K93-20; introd. 2012. Fruit: medium-red surface and interior; medium to large, 15 g; broader than long, short conic, cordate, or globose; achenes slightly below fruit surface; firm; fresh flavor very good, sweet, aromatic; mid-season, ripens with Kent about 3 d before Jewel. Plant: high vigor; medium to high runner numbers; medium yields in matted rows; resistant to red stele root rot (Phytophthora cactorum) and common leaf spot (Ramularia tulasnei); moderately resistant to powdery mildew, anthracnose crown rot, and verticillium wilt; tolerant of two-spotted spider mite.

Marvel. Fully everbearing strawberry adapted to south-central coastal California. Origin: Plant Sciences, Inc., Watsonville, CA, and Berry R&D, Inc., Watsonville, CA by S.M. Ackerman, S.D. Nelson, and M.D. Nelson. PS-1269 x PS-2280; crossed 2001; selected 2003; USPP 20,307; 15 Sept. 2009. Fruit: glossy red, Munsell 7.5R 3/8 to 4/12; medium to large, 23.5 g; conic to cylindrical; flesh red, Munsell 7.5R 3/12 to 4/12; good flavor, 8.6% Brix; large spreading calyx; achenes level to above surface; mid-season. Plant: medium to strong vigor, medium stolon number, 7.7 stolons/plant; low to moderate yield, 615–618 g/plant; globose, medium to dense foliage; flowers level with foliage, prostrate fruiting trusses; moderately susceptible to two-spotted spider mite, flower thrips, powdery mildew, botrytis fruit rot, and angular leaf spot.


Pircinque: Short-day strawberry adapted to southern European areas. Origin: CRA-FRF, Unità di Ricerca per la Frutticoltura, Forlì and Società Piraccini Secondo S.r.l., Cesena, Italy, by W. Faedi and G. Baruzzi. Nora x Ventana; crossed 2004; selected 2006; introd. 2010. CPVO No. 20100648; 16 Mar. 2010. Fruit: glossy red; large, 30.6 g, larger than Sabrosa-Candonga®; uniform conical, flesh firm, medium-red; sweet; achenes level with surface; early harvest, beginning in late January in Metaponto area, 10–15% production by late March. Plant: very vigorous; freezer yield greater than Sabrosa-Candonga®; commercial quality similar to Sabrosa-Candonga® under southern Italian conditions; inflorescences level with foliage; long petioles; easy fruit picking; low winter chilling requirement; moderately tolerant to soil borne pathogens; susceptible to botrytis fruit rot and powdery mildew.

Portola. Day-neutral strawberry adapted to central California. Origin: University of California, by D.V. Shaw, and K.D. Larson. Cal 97.93-7 x Cal 97.209-1; crossed 2001; tested as Cal 1,206-5 and CN224; selected 2002. USPP 20,552; 15 Dec. 2009. Fruit: glossy red-orange, Munsell 2.5R 4/10; large, 32 g; very uniform medium-short conical; flesh firm, light red-orange, Munsell 5R 6/1; very mild flavor; large spreading to reflexed calyx; achenes level to below surface; early. Plant: medium to strong vigor, very stoloniferous, 32/plant; extremely high yield, 3,336 g/plant; globose, medium to dense foliage; flowers level to above foliage, prostrate fruiting trusses; resistant to phytophthora crown rot (Phytophthora cactorum) and common leaf spot (Ramularia tulasnei); moderately resistant to powdery mildew, anthracnose crown rot, and verticillium wilt; tolerant of two-spotted spider mite.

Puget Crimson. Short-day strawberry adapted to the Pacific Northwest. Origin: Washington State University by P.P. Moore and W. Hoashi-Erhardt. Schwartz x Valley Red; crossed 2003; selected 2005; tested as WSU 2833; introd. 2010. USPP applied for. Fruit: red; large; conical to wedge-shaped; longer than wide; flesh red, excellent flavor similar to Schwartz; reflexed calyx; achenes level with or below fruit surface; late-ripening with Schwartz and Firecracker. Plant: vigorous, many stolons forming dense matted row; yield greater than or similar to Tillamook under western Washington conditions; erect, dense foliage; flowers at or beneath canopy; susceptible to powdery mildew and moderately susceptible to leaf scorch (Diplocarpon earliani).


Reliance. Partially everbearing strawberry adapted to central coastal California. Origin: Plant Sciences, Inc., Watsonville, CA, and Berry R&D, Inc., Watsonville, CA by S.M. Ackerman, S.D. Nelson, and M.D. Nelson. PS-592 x PS-1269, crossed 2000; selected 2002; USPP 21,415; 26 Oct. 2010. Fruit: red to dark red, R.H.S. 46A; large to very large, 27.4 g; uniform conical; flesh red, R.H.S. 44A; good flavor, 8.8% Brix; mid-sized spreading to reflexed calyx; achenes level with surface; mid-season. Plant: medium vigor, 3.5 crowns/plant, few stolons, 1.1/plant; high yield, 1,646 g/plant; globose, medium density foliage; flowers below foliage, prostrate fruiting trusses; moderately resistant to flower thrips; moderately susceptible to two-spotted spider mite, powdery mildew, and botrytis fruit rot; susceptible to angular leaf spot.

Rotemi. Partially remontant strawberry adapted to winter production in low tunnels on the Hod Hasharon, Sharon coastal plain, Israel. Origin: Hod Hasharon, Israel, by E. Yosef and A. Meizles, EF 14 x EF 7; crossed 2005; USPP 20,970; 4 May 2010. Fruit: red, R.H.S. 44B; very large, 30 g; uniform conical; flesh firm, red, R.H.S. 44B; orange-red, R.H.S. 34A; and white, R.H.S. 155D; good flavor, 7.9% Brix, mild acidity; mid-sized reflexed calyx; achenes level with surface; early. Plant: medium vigor, very stoloniferous in summer, 100–800/plant; but few in winter production; moderate to high yield, 1,000 g/plant; flat globose, medium density foliage; flowers above foliage, semi-erect fruiting trusses; tolerant of powdery mildew.

Shaked. Partially remontant strawberry adapted to winter production in low tunnels on the Hod Hasharon, Sharon coastal plain, Israel. Origin: E. Yosef, Hod HaSharon, IL, by E. Yosef and A. Meizles. EF 14 x EF 33, crossed 2005; selected in Hod Hasharon, IL; USPP 20,995, 18 May 2010. Fruit: glossy dark red, R.H.S. 46B; medium size, 25 g; uniform conical; flesh red and white, R.H.S. 46B–43A and
R.H.S. 155B, excellent flavor, 7.5%–9.5% Brix, mild acidity; mid-sized reflexed calyx; achenes above surface; mid-season. **Plant:** medium vigor, very stoloniferous in summer, 100–1000 per plant, fewer in winter production; moderate to high yield, 850 g/plant; flat globose, medium density foliage; flowers above foliage, semi-eject to prostrate fruiting trusses; moderately tolerant of powdery mildew.

**Summer Dawn.** Short-day strawberry adapted to eastern Canada that is primarily suited for the fresh market. Previously released as V151, and described in List 44.

**Summer Evening.** Short-day strawberry adapted to eastern Canada that is primarily suited for the fresh market. **Origin:** University of Guelph–Simcoe Research Station, Simcoe, Ontario, Canada; by A. Dale. Idea x 128T99; crossed 1996; selected 1998; tested as 108Y79; introd. 2012. **Fruit:** very bright, medium-red skin; medium-red flesh; large; firm flesh and skin; excellent fresh flavor; very late, 1-2 d later than Serenity. **Plant:** vigorous; high yields with 2-3 inflorescences per crown; runners well; hardy; moderately resistant to leaf scorch; susceptible to anthracnose.

**Summer Rose.** Short-day strawberry adapted to eastern Canada that is primarily suited for the fresh market. **Origin:** University of Guelph–Simcoe Research Station, Simcoe, Ontario, Canada by A. Dale. 137AB4 x Chandler; crossed 1991; selected 1993; tested as 32R14; introd. 2009. **Fruit:** very bright, pale to medium-red skin; medium-red flesh; very large; firm skin; excellent fresh flavor; late season similar to Serenity. **Plant:** vigorous; produces one inflorescence per crown with all fruit marketable; moderate yields which were consistent in trials throughout Ontario; runners well; hardy; susceptible to anthracnose.

**Summer Ruby.** Short-day strawberry adapted to eastern Canada that is primarily suited for the fresh market. **Origin:** University of Guelph–Simcoe Research Station, Simcoe, Ontario, Canada by A. Dale and A. Sullivan. 57K104 x 572116; crossed 1993; selected 1995; tested as 2V55; introd. 2011. **Fruit:** very bright, medium-red skin; medium-red flesh; large; moderately-firm flesh; firm skin; good fresh flavor; mid-season, similar to Kent. **Plant:** vigorous; yielded well in trials in Ontario; runners well; hardy; susceptible to anthracnose.

**Sweet Bliss.** Short-day strawberry particularly well adapted to the North America’s Pacific Northwest with outstanding fruit quality suited to fresh or processing markets. **Origin:** USDA-ARS, Corvalis, OR, by C.E. Finn, C. Kempler, P.P. Moore, B.C. Strik, B.M. Yorgey, R.R. Martin, and G.J. Galletta. B 753 x ORUS 1735-1; crossed 1998; selected as ORUS 2180-1; introd. 2011. **Fruit:** glossy, bright red skin; solid red flesh; attractive reflexed calyx; medium, 13–20 g; uniform conic; firm; Brix similar to Totem. **Plant:** medium vigor; high yield, greater than Totem; upright and open habit; P. cactorum can kill some plants at some locations but have not seen fruit symptoms. **Flavor:** visible and easily harvested; picks easily with caps on or off; with lower pH and higher titratable acidity; sweet and outstanding sweetness and acidity; achenes level with fruit surface; late season similar to Serenity. Previously released as K99-28; introd. 2009. Canada Plant Breeders Rights 3484; 14 May 2009.

**Valley Sunset.** Short-day strawberry adapted to eastern Canada. **Origin:** Agriculture and Agri-Food Canada, Atlantic Food and Horticulture Research Centre, Kentville, Nova Scotia by A.R. Jamieson. K94-15 x K95-24; crossed 1998; selected 1999; tested as K99-28; introd. 2009. Canada Plant Breeders Rights 3484; 14 May 2009. **Fruit:** orange-red; large, 24 g; wedge to cordate; broader than long, flesh medium firm, light orange-red; fresh flavor good, medium sweetness and acidity; achenes level with fruit surface; late season, ripens with or just before Ovation. **Plant:** medium vigor; moderate runner numbers; productive in matted rows; susceptible to red stele root rot (P. fragariae), powdery mildew, and botrytis fruit rot.

**Winter Dawn.** Short-day strawberry adapted to winter production in Florida. **Origin:** Florida State Agricultural Experiment Station, University of Florida, by C.K. Chandler. FL 93-103 x FL 95-316; selected 1997–1998 season; USPP 21,558; 7 Dec. 2010. **Fruit:** glossy deep red, Pantone® 1807C; medium to large, 18.2 g; variable asymmetrical shape conic, wedged or oval; flesh orange-red and white, Pantone® 1795C; aromatic, slightly tart; mid-sized attractive calyx; achenes level to above surface; early. **Plant:** relatively small, stoloniferous in winter nursery but few stolons in production; moderate to high yield, 570–635 g/plant; globose, medium to dense foliage; flowers below foliage, prostrate fruiting trusses; moderately resistant to botrytis fruit rot and anthracnose fruit rot.
Coconut Cream MANGO
Compact BLUEBERRY
CONVI KIWFUIT
CONVI97001 KIWFUIT
Cozia HAZELNUT
Crimson Cabernet GRAPE
Crimson Giant RASPBERRY
Cuixiang KIWFUIT
Cuiyu KIWFUIT
Daligris APPLE
Daniel APRICOT
DAR 1-12-19 CACTUS PEAR
DAR 1-21-27 CACTUS PEAR
DAR 1-27-19 CACTUS PEAR
DAR 1-29-21 CACTUS PEAR
Delicia BLUEBERRY
Dolce Blue BLUEBERRY
Dolomia RASPBERRY
Donna STRAWBERRY
Doonuri GRAPE
DrisBlackTwo BLACKBERRY
DrisStrawEight STRAWBERRY
DrisStrawEleven STRAWBERRY
DrisStrawFifteen STRAWBERRY
DrisStrawFourteen STRAWBERRY
DrisStrawNine STRAWBERRY
DrisStrawSeven STRAWBERRY
DrisStrawSeventeen STRAWBERRY
DrisStrawSix STRAWBERRY
DrisStrawSixteen STRAWBERRY
DrisStrawTen STRAWBERRY
DrisStrawThirteen STRAWBERRY
DrisStrawTwelve STRAWBERRY
EarlibirdBlue BLUEBERRY
Earligold KIWFUIT
Earligreen® KIWFUIT
Elizabeth KIWFUIT
Emihoutao No 1 KIWFUIT
Eta HAZELNUT
Fallette PLUM
Fay Rouge GRAPE
Ferielle HAZELNUT
Ferwiller HAZELNUT
First Emperor KIWFUIT
FL 01-173 BLUEBERRY
FL 02-40 BLUEBERRY
FL 96-43 BLUEBERRY
Flatprety PEACH
FlatQueen PEACH
Flicker™ BLUEBERRY
Fredrick PERSIAN WALNUT
Frulanche BLACKBERRY
FT 79-3 KIWFUIT
FT 79-5 KIWFUIT
FY 79-1 KIWFUIT
G.210 APPLE ROOTSTOCK
G.214 APPLE ROOTSTOCK
G.222 APPLE ROOTSTOCK
G.890 APPLE ROOTSTOCK
G.969 APPLE ROOTSTOCK
Ganmi No 1 KIWFUIT
Ganmi No 2 KIWFUIT
Ganmi No 3 KIWFUIT
Geneva® G.210 APPLE ROOTSTOCK
Geneva® G.214 APPLE ROOTSTOCK
Geneva® G.222 APPLE ROOTSTOCK
Geneva® G.890 APPLE ROOTSTOCK
Geneva® G.969 APPLE ROOTSTOCK
Giant Bright NECTARINE
Glen Cally RASPBERRY
Glen Erich RASPBERRY
Glory STRAWBERRY
Goldlane APPLE
Green Light® KIWFUIT
Green Star KIWFUIT
Guichang KIWFUIT
Guaihai No. 4 KIWFUIT
Gula Batu RAMBUTAN
Herriot STRAWBERRY
Hinsel GOOSEEBERRY
HJ-6 BLACKBERRY
Hongyang KIWFUIT
Hort16A KIWFUIT
Hortarine 1 NECTARINE
Hortblue Demure BLUEBERRY
Hortblue Onyx BLUEBERRY
Huamei No 2 KIWFUIT
Huayou KIWFUIT
Huron BLUEBERRY
IFG 68-175 GRAPE
Island Blue BLUEBERRY
Ivanhoe PERSIAN WALNUT
Jefferson HAZELNUT
Jinfeng KIWFUIT
Jingold™ KIWFUIT
Jinkui KIWFUIT
Jinshui II-16-11 KIWFUIT
Jintao KIWFUIT
Jinxiang KIWFUIT
Jinyan KIWFUIT
Jitlee RAMBUTAN
Jugala APPLE
Julieprety PEACH
Ka-Bluey™ BLUEBERRY
Kamitsu KIWFUIT
KAR 4 APPLE
KAS 9 APPLE
Kestrel™ BLUEBERRY
Kilauea BLUEBERRY
Kingfisher GRAPE ROOTSTOCK
KSU 8-2 PAWPAW
KSU-Atwood™ PAWPAW
Kuimi KIWFUIT
KV00398 PEACH
KV981175 PEACH
Lagorai RASPBERRY
Laurel STRAWBERRY
Lax BLUEBERRY
Leah Cot PUBESCENT-SKINNED PRUNOPHORA HYBRID
Lentz Jonagold APPLE
Liangmei No 1 KIWFUIT
LI-1000 APPLE
Lucrezia PEACH
Lushanxiang KIWFUIT
Marvel STRAWBERRY
Matador GRAPE ROOTSTOCK
May Bright NECTARINE
Meadowlark™ BLUEBERRY
MegaKiwis™ KIWFUIT
Meteor KIWFUIT
Miliang No. 1 KIWFUIT
Moshan No. 4 KIWFUIT
MP-29 PEACH ROOTSTOCK
N7-3 CITRUS (ORANGE)
Nadia PEACH
Natval HAZELNUT
Nettleton Creamy White BLACKBERRY
Nevson APPLE
New York 1 APPLE
New York 2 APPLE
NY99-15 STRAWBERRY
Odysseus APPLE
Ono BLUEBERRY
Onyx BLACKBERRY
Ores CURRANT
Pacific Deluxe RASPBERRY
Panda™ Forest Red Kiwi KIWIFRUIT
Panda™ Golden Kiwi KIWIFRUIT
Pearl BLUEBERRY
Piccinque STRAWBERRY
Pixie GRAPE
PLBAR B1 APPLE
PLFOG99 APPLE
PLMAS98 APPLE
Plumcandy V PLUM
Plumred III PLUM
Plumred VI PLUM
Plymouth GRAPE
Portola STRAWBERRY
PremA153 APPLE
Prestige STRAWBERRY
Primval HAZELNUT
Prod BLUEBERRY
Puget Crimson STRAWBERRY
Purple Wonder™ STRAWBERRY
Qianzi 82-3 KIWIFRUIT
Qimei KIWIFRUIT
Qinyang APPLE
R-134 RAMBUTAN
R-156 Y RAMBUTAN
R-162 RAMBUTAN
R-167 RAMBUTAN
Razz BLUEBERRY
Rebus 028® NECTARINE
Rebus 038® NECTARINE
Rebus 195® NECTARINE
Red Button BLUEBERRY
Red Dragon HAZELNUT
Red Sun KIWIFRUIT
Reliance STRAWBERRY
Replantpac PLUM ROOTSTOCK
Resika GOOSEBERRY
RGLORS APPLE
Romavel HAZELNUT
Rongren RAMBUTAN
Rootpac® R PLUM ROOTSTOCK
Rosella PEACH
Rotemi STRAWBERRY
RS1 KIWIFRUIT
Ruben CURRANT
Rubia PEACH
Rubisco PEACH
Safir BLUEBERRY
Sanuki Gold KIWIFRUIT
Sauzee Pride PEACH
Scarlet Knight™ CRANBERRY
Scout GRAPE
September Sentinel APPLE
SF14W-62 CITRUS (ORANGE)
Shaked STRAWBERRY
Simultán BLUEBERRY
Sky Blue BLUEBERRY
Smaragd APPLE
Smoothe™ BLUEBERRY
Soleada PEACH
Soreli KIWIFRUIT
Southern Cross GRAPE
Southern Splendour BLUEBERRY
Sparkler KIWIFRUIT
Sugrathirty six GRAPE
Summer Dawn STRAWBERRY
Summer Evening STRAWBERRY
Summer Rose STRAWBERRY
Summer Ruby STRAWBERRY
Summer Sunset™ BLUEBERRY
Summerfaenza KIWIFRUIT
Summerkiwi® KIWIFRUIT
Summerkiwi 3373 KIWIFRUIT
Sunmirich PEACH
Sunset Blue BLUEBERRY
Suplumforty PLUM
Suplumthirtyone PLUM
Sweet Bliss STRAWBERRY
Sweet Celebration™ GRAPE
Sweet Majesty PLUM
Sweetcot II PUBESCENT-SKINNED PRUNOPHORA HYBRID
Sweetheart BLUEBERRY
Sweetlove PEACH
Sweetmoon PEACH
Sweetprim PEACH
Sweetstar PEACH
T-885 BLUEBERRY
Tahsis CURRANT
Takahe BLUEBERRY
Tankemunchu GRAPE
Tasty Blue™ BLUEBERRY
Theta HAZELNUT
Tines CURRANT
Tonda Pacifica HAZELNUT
Tsechelidis KIWIFRUIT
Tundra BLUE HONEYSUCKLE
Turandot KIWIFRUIT
UF ONE PEACH
UGilo PEACH
Uriase de Valcea HAZELNUT
Vajolet RASPBERRY
Valcea 22 HAZELNUT
Valenfresh™ CITRUS (ORANGE)
Valjohn GRAPE
Valley Sunset STRAWBERRY
Valquarius™ CITRUS (ORANGE)
Velluto Blue BLUEBERRY
Victoria Red GRAPE
Vintage Germplasm ELDERBERRY
Vintage RASPBERRY
Vital BLUEBERRY
WA 2 APPLE
WA 5 APPLE
Whistler CURRANT
White KIWIFRUIT
Whitu BLUEBERRY
WIB-C6 KIWIFRUIT
Winter Dawn STRAWBERRY
Wuzhi 81-36 KIWIFRUIT
Wuzhi No 3 KIWIFRUIT
Wyldewood ELDERBERRY
Ximi No 9 KIWIFRUIT
Xuxiang KIWIFRUIT
Yamhill HAZELNUT
Yate KIWIFRUIT
Yellow Joy KIWIFRUIT
Yumihoutao No 2 KIWIFRUIT
Zaoxian No 1 KIWIFRUIT
ZESPRI® GOLD KIWIFRUIT
Zhouzhi No 1 KIWIFRUIT
Zinthiana GRAPE
ADDENDA
GRAPE
Majesty. USPP 21,965; 7 June 2011 (List 45).
GRAPE ROOTSTOCK

PEACH ROOTSTOCK
Greenpac. USPP 21,792 issued 22 Mar. 2011 (List 45).

RASPBERRY
Adele red raspberry. USPP 20,733. 23 Feb. 2010 (List 45).
Autumn Treasure red raspberry. USPP 20,769. 23 Feb. 2010 (List 45).
Awaroa red raspberry. USPP 20,746. 9 Feb. 2010 (List 45).

Bethan red raspberry listed in the Register of New Fruit and Nut Cultivars, List 45, had been retracted as the information was incorrectly published.
Grandeur red raspberry. USPP 20,459. 10 Feb. 2009 (List 45).
Korere red raspberry. USPP 20,772. 23 Feb. 2010 (List 45).
Korpiko red raspberry. USPP 20,771. 23 Feb. 2010 (List 45).
Rudyberry red raspberry should be Rudi red raspberry. Canadian PBR 4,114. 17 Aug. 2011 (List 45).
Sugana red raspberry. USPP 21,357. 5 Oct. 2010 (List 45).
Wakefield red raspberry. USPP 21,185. 10 Aug. 2010 (List 45).

STRAWBERRY
Cristal. USPP 20,447; 3 Nov. 2009 (List 45).
Tamir. USPP 20,647; 19 Jan. 2010 (List 44).