Crop Listings
Apricot
Blackberry and hybrid berries
Blueberry
Grape
Grape rootstock
Nectarine
Paw-paw
Peach
Pecan
Plum and plum hybrids
Prunus rootstock
Raspberry
Strawberry
Tropical fruit
Avocado
Kiwifruit

APRICOT

Craig A. Ledbetter
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Apache. A very early season apricot for the fresh market. Origin: Fresno, Calif., by USDA, Agricultural Research Service. Selected in 1992 by Craig A. Ledbetter from the progeny of the cross K147-70 x K604-19; tested as P301-105; introduced in 2002. Fruit: freestone; solid orange color; firm and fine-textured flesh; responds favorably to limb girdling, very aromatic when tree ripe, fruit ripen during first week of May in Parlier, Calif.; exceptional postharvest life. Tree: vigorous and erect growth habit; self-incompatible flowers with an early bloom period; plentiful spurs and easy renewal. Nicole. An early season industrial apricot for the processing markets. Origin: Parlier, Calif., by USDA, Agricultural Research Service. Selected in 1992 by Craig A. Ledbetter from open-pollinated seedlings of K102-93; tested as K713-98; introduced in 2003. Fruit: below average size for ripening season; freestone; bright orange skin with strong blush on sun-exposed surfaces; high Brix and aroma when ripe; average ripen date during third week of May in Parlier. Tree: vigorous and erect growth habit; fruit distributed equally amongst spurs and 1-year-old shoots; prolific bloom of self-incompatible flowers; early to mid flowering period.

BLACKBERRY AND HYBRID BERRIES

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John R. Clark
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Ouachita. A thornless, erect, firm-fruited blackberry. Origin: University of Arkansas, by John R. Clark and James N. Moore. Navaho x Ark. 1506; cross made in 1990; selected in 1993; tested as Ark. 1905. introduced in 2003. USPP13,525 issued 28 Jan. 2003; assigned to Driscoll Strawberry Associates, Inc. Fruit: medium-large, 7 g; firm; blocky and conical; glossy; solid soluble solids 10% to 11%; seed dry wt 4.5 mg; posthar- vest evaluations indicate comparable to near comparable to Navaho; even drupelet set; ripens on average 12 June at Clarksville, Ark. between Arapaho and Navaho. Plant: erect canes; thorny; productive, exceeding yield of Arapaho and comparable to Apache; moderate vigor; hardiness not well tested but hardy to –17.4 °C; resistant to double blossom/rosette (Cercosporella rubi); moderately resistant to anthracnose (Elisnoë vereneta). Pecos. A midseason, thornless cultivar. Origin: developed by C.D. Fear, Driscoll Strawberry Associates, Inc., in Watsonville, Calif. Navaho x Loch Ness; selected in 1993; USPP13,525 issued 28 Jan. 2003; assigned to Driscoll Strawberry Associates, Inc. Fruit: solid black; medium-glossy; medium size (4.5 g), larger than Chester Thornless but smaller than Olallie; firm (firmer than Loch Ness); excellent shipping qualities; soluble solids 10.8%, greater than Chester Thornless; seed dry wt 3.5 mg; similar harvest season to Loch Ness. Plant: semi-upright; thornless; lower chill requirement than Navaho; yield less than Olallie.

SLEEPING BEAUTY. An early season, large fruited, low-chill cultivar. Origin: developed by C.D. Fear, Driscoll Strawberry Associates, Inc., in Watsonville, Calif. Brazos x Hull Thorn- less; cross made in 1991; selected in 1994; USPP13,758 issued 6 May 2003; assigned to Driscoll Strawberry Associates, Inc. Fruit: solid black; glossy; large size (5.1 g), similar to Olallie but larger than Chester Thornless; firm; excellent shipping qualities; long fruiting period; firmer and less acidic than Brazos; soluble solids 10.2%, lower than Olallie but higher than Chester Thornless; seed dry wt 4.1 mg; early ripening but later than Olallie. Plant: semi-upright; thorny; low-chill requirement; yield similar or slightly greater than Olallie.

Zoro. An early season, low-chill cultivar. Origin: developed by C.D. Fear, Driscoll Straw- berry Associates, Inc., in Watsonville, Calif. By 59.2 x BY46.1; cross made in 1991; selected in 1996; USPP13,759 issued 6 May 2003; assigned to Driscoll Strawberry Associates, Inc. Fruit: stable postharvest color; medium size (4.2 g), smaller than Olallie but larger than Chester Thornless; firm; soluble solids 9.6%, lower than Chester Thornless; seed dry wt 2.3 mg; long fruiting period; firmer and better shipping quality than Olallie. Plant: semi-upright; thorn; low-chill requirement; yield similar or slightly less than Olallie.

BLUEBERRY

Paul Lyrene
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Craven. An early to early-midseason southern highbush blueberry suitable for mechanical harvest. Origin: from the cross NC 1406 (US 74 x Elizabeth) x Pender made by J.R. Ballington. Selected in 1987 at Castle Hayne, N.C. Tested as NC 2910. License required for propagation. Berry: small to medium size; good for mechanical harvest; excellent color and scar; good firmness and flavor. Stores well. Plant: vigorous, upright, and capable of high yields; leaves show genetic variegation; flowers later than Reveille. Ripens slightly later than Reveille and Bladen and earlier than Pender. Self-fruitful.

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W.R. Okie, editor
U.S. Department of Agriculture, Agricultural Research Service, Southeastern Fruit and Tree Nut Research Laboratory, 21 Dunbar Road, Byron, GA 31008

**Lenoir.** A midseason southern highbush variety. **Origin:** from the cross NC 1406 (US 74 x Elizabeth) x Pender made by J.R. Ballington. Selected at Castle Hayne, N.C., in 1988. Tested as NC 3115. License required for propagation. **Berry:** medium size with excellent flavor. Good firmness and scar. Berry color similar to Croatan (medium blue). Suitable for machine or hand-harvested fresh fruit. Store well. **Plant:** vigorous, semi-upright. Capable of high yields, self-unfruitful. Flowers later than Reveille; ripens with Pender, somewhat later than Reveille and Bladen.

**Liberty.** A late-ripening highbush blueberry. **Origin:** from the cross Brigitta x Elliott made in Grand Junction, Mich., in 1991. Original seedling selected in Benton Harbor, Mich., in 1997. Tested as MSU 58. Released in 2003. USPPAF. **Berry:** medium-large with small, dry picking scar; excellent powder-blue color; excellent flavor and aroma. Ripens to ripen about 5 d before Elliott in Michigan. Fruit stores well. **Plant:** vigorous, semi-upright. Capable of high yields, self-unfruitful. Flowers later than Reveille; ripens with Pender, somewhat later than Reveille and Bladen.

**Ochlockonee.** A late-ripening, high-yielding rabbiteye (Vaccinium ashei) cultivar. **Origin:** from the cross Tifblue x Menditto, made in Beltsville, Md. Selected in the mid 1960s at the Coastal Plain Experiment Station, Tifton, Ga. Tested as T105, and released in 2002. USPPAF. **Berry:** large. Similar to Tifblue in stem scar, color, firmness, and flavor. **Plant:** vigorous and upright with numerous, moderately branched canes and well-displayed fruit. Plants very winter hardy.

**Pamlico.** A high-yielding, self-fruitful southern highbush blueberry. **Origin:** from the cross NC 1406 (US 74 x Elizabeth) x Pender made by J.R. Ballington. Selected in 1988 at Castle Hayne, N.C. Tested as NC 3201. License required for propagation. **Berry:** small to medium size; excellent color and scar; good firmness and flavor. Good postharvest life. Suitable for mechanical harvest for fresh market. **Plant:** vigorous and upright; has resistance or field tolerance to stem blight (Botryosphaeria dothidea); self-fruitful; Flowers after Reveille; early-midseason to midseason ripening; begins ripening after Reveille and Bladen but before Pender.

**Sebring.** A low-chill southern highbush blueberry. **Origin:** from the cross Sharpblue x O’Neal made at the University of Florida, Gainesville, in 1981. Selected in 1983 and tested in central and northern Florida as FL 87-122. USPP13,683. **Berry:** medium-large, dark blue, good scar, firmness, and flavor. **Plant:** upright and vigorous; flowers in mid-February in northern Florida and ripens from late April to early May. Chill requirement suitable for central and northern Florida (200 to 300 h). Leaves well after mild winters. Only medium resistance to phytophthora root rot (Phytophthora cinamomea). Not self-fruitful.

**Southern Belle.** A southern highbush blueberry with very firm fruit. **Origin:** parents unknown. Seed originated at University of Florida; selected as a superior clone in Homerville, Ga., about 1986. USPP13,931. **Berry:** large, firm, with excellent scar and medium blue color. Berry stores well. **Plant:** very vigorous when healthy and on good soil but quite susceptible to phytophthora root rot. Makes a dense, wide bush but not excessively twiggy. Produces numerous flower buds. Chilling requirement suitable for northern Florida and southern Georgia (400 to 600 h). Capable of high yields on good sites but requires excellent drainage.

**Sunbird.** A southern highbush blueberry with large fruit. **Origin:** from the cross FL83-132 x O’Neal made at the University of Florida, Gainesville, in 1984. First selected in 1986 and tested in central and northern Florida as FL 88-53. USPP12,783. **Berry:** very large, with good flavor. Medium dark with medium to good firmness. Scar is large and sometimes wet, which can sometimes cause postharvest problems. **Plant:** vigorous with stout stems; between spreading and erect. Chilling requirement suitable for northern Florida and southern Georgia (300 to 500 h). Flowers in late February and early March in northern Florida; ripens in late April and early May. Medium to good survival in the field in northern Florida.

**GRAPE**

**John R. Clark**
University of Arkansas, Fayetteville

14-37-111. An early ripening, red, unusual shape, seedless table grape. **Origin:** developed by Timothy Bourne, SunView Vineyards of California, Inc., Delano. Parents are unidentified but the female is described as having Hunisa, Emperor, Thompson Seedless, and the male having Emperor, Thompson Seedless, Muscat of Alexandria, and Calmeria in their composition, white wine grape.

**Maximus.** A red wine grape. **Origin:** developed by M. Zamboni and M. Fregoni, Istituto di Frutti-Viticoltura, Universita Cattolica Santo Cuore, Piacenza, Italy. Barbera x Croatina; cross made in 1970; selected in 1995; tested as I.F. 108; introduced in 2000; no indication of protection. **Berry:** dark red-violet; medium, 1.7 g; ripens 15 to 20 Sept., earlier than Barbera; 24 brix; pH 3.2. **Cluster:** medium, 180 g. **Vine:** vigorous; moderately productive. Wine is intensely colored but balanced.

**Ruby Seedless.** A red wine grape. **Origin:** developed by Alan Asadourian, Fresno, Calif.; unnamed variety x Ruby Seedless; cross made in 1991; USPP13,607; 25 Feb. 2003; assigned to Denken Farms. **Berry:** usually red, depending on light exposure; medium, 1.9 g; round to slightly oblong; usually ripening, 3 to 4 weeks earlier than Thompson Seedless; 23.2 brix; neutral flavor; firm and not considered juicy; berries contain average of 2.6 very small seed traces which are inconsequential. **Cluster:** medium to large, 409 g; long-conical, sometimes shouldered, small wings common; loose to well-filled. **Vine:** very vigorous; upright dense and tender form when head-trained and cane-pruned; high yielding; well-suited for dry-on-vine raisin production.

**L’Acadie.** A cold hardy, midseason-ripening, white wine grape. **Origin:** developed by Helen Fisher, Horticultural Research Institute of Ontario, University of Guelph, Vineland Station, Ontario, Canada and Andrew Jamieson, Atlantic Food and Horticultural Research, Centre Agriculture and AgriFood Canada, Kentville, Nova Scotia, Canada; Cascade x Seyve-Villard 14-287; cross made in 1953 by O.A. Brandt, Vineland Station; tested as VS 65; no indication of protection. **Berry:** white; 18.0 brix; 3.2 pH; lower acidity than Seyval. **Vine:** very cold hardy, survival at –31°C; consistent productivity under short growing season (138 FFD) and low heat unit conditions (964 HU > 10°C). Wines are slightly spicy with a floral aroma but no V. labrusca character.

**Malvasia Rosa.** An aromatic, pink wine grape. **Origin:** Bud mutation of Malvasia di Candia; discovered in 1967; evaluated and propagated by M. Fregoni, Istituto di Frutti-Viticoltura, Universita Cattolica Santo Cuore, Piacenza, Italy. **Berry:** intense pink; medium to large, 2.2 g; round; 21.0 brix; 3.2 pH; firm skin, medium thickness; contains 1 to 3 seeds of medium size. **Cluster:** medium-large, 300 g; pyramidal, sometimes with wings; medium-loose.
Fruit: high vigor, similar to original variety; produces 13.2 lb/ha in Piacenza. Wine has pink color and a characteristic muscat aroma.

Sarah Anne. A dark-purple, seeded table grape. Origin: bud mutation of Kyoho; evaluated and propagated by Hideki Otani, Reedley, Calif.; USPP14,193; 30 Sept. 2003; assigned to Richard Snellenberg and Hideki Otani, Reedley, Calif. Fruit: dark-purple; larger than Emperor and Thompson Seedless, 9.9 g; contains 2 to 3 seeds; average weight 0.13 g; oblong, slightly tapered toward stem; ripens with Kyoho; holds well on the vine; 23 to 27 brix range; very fruity and sweet flavor; very juicy, somewhat soft; aromatic; medium skin thickness; no tendency to crack in rainfall; slip skin. Cluster: medium, 60 to 90 berries. Vine: moderate vigor; very productive; resistant to powdery mildew; spur pruned.

Serbia. A very early ripening, dark-blue table grape. Origin: developed by L. Avramov, N. Gašic, M. Jovanovic, M. Ružević, M. Puljiz, and R. Rudaković, Faculty of Agriculture, Zemun, Yugoslavia; open pollination of table variety Ribier (Alfonse Lavellelé); seeds collected in 1959; approved for release 1998; no indication of protection. Fruit: dark-blue; large to very large, 5 to 6.5 g; round; flesh crunchy; sugar content 14% to 18%; lower acid than Cardinal. Cluster: large, 150 to 400 g; cylindrical or cylindrically conical. Vine: vigorous; greater yield than Cardinal; medium sensitive to powdery mildew; some resistance to Botrytis; resistant to low winter temperatures (−15 to −18°C).


Sugraneteen. A very late-ripening, red, seadless table grape. Origin: developed by David Cain, Bakersfield, Calif.; Thompson Seedless; late; sugar content 21.0%; thin skin and adheres to flesh; no tendency to crack; rudimentary seeds of about 1.3 mg/seed; extremely crisp; firm. Cluster: very large, 728 g; cylindrical; very loose. Vine: medium vigor; very productive, especially when pruned.

Sugratwenty. A large, red, seeded table grape. Origin: developed by David Cain, Sun World International Inc., Bakersfield, Calif.; Sun World Breeding Selection 90089-165-268 x Sun World International Breeding Selection 90227-127-008; cross made in 1993, selected in 1995 in Wasco, Kern Co. Cal. USPP13,444; 31 Dec. 2002; assigned to Sun World International. Fruit: red-grey; very large, 8.7 g but can attain an average weight of 13.9 g with girdling and gibberellic acid application; round; ripens about 25 d after Thompson Seedless; sugar content 15.0% to 18%; thin skin that adheres to flesh; no tendency to crack; rudimentary seeds of about 2.2 mg/seed; firm. Cluster: large, 549 g; conical; medium-dense. Vine: weak vigor; productive.

Sugratwentytwo. A late-ripening, white, seedless table grape. Origin: developed by David Cain, Sun World International Inc., Bakersfield, Calif.; Thompson Seedless; early; sugar content 21%; thick skin that adheres to flesh; no tendency to crack. Usual size: medium, 854 g; conical; medium-dense. Vine: medium to weak vigor; very productive.

Sugratwentythree. A black, seedless, large-fruited table grape. Origin: developed by David Cain, Sun World International Inc., Bakersfield, Calif.; Sun World Breeding Selection 89339-089-291; size: medium to large, 89152-064-236 x Sun World Seedling Selection 89314-202-189; cross made in 1993, selected in 1995 in Wasco, Kern Co. Cal. USPP13,198; 12 Nov. 2002; assigned to Sun World International. Fruit: green-yellow; medium, 3.9 g; oblong; ripens about 60 d after Thompson Seedless; sugar content 18.0%; thin skin and adheres to flesh; no tendency to crack; rudimentary seeds of about 3.2 mg/seed; firm. Cluster: large, 775 g; conical; loose. Vine: vigorous; productive, especially when pruned to short spurs.

Tomcord. A blue-black, Concord-flavored, seeded table grape. Origin: developed by David Ramming and Ronald Tarailo, USDA Horticultural Crops Research Laboratory, Fresno, Cal.; Thompson Seedless x Concord; tested as A29-67; cross made in 1983, selected in 1986 in the San Joaquin Valley of Cal.; not patented. Fruit: blue-black; similar in size to Mars and Venus, 3.0 to 3.5 g; sugar content 19% to 21%; Concord flavor, but not as strong as Concord; medium skin and adheres to flesh; medium-soft flesh; rudimentary seeds small, but may be noticeable. Cluster: 341 g; conical with a small wing; medium to slightly loose. Vine: productive, 13 to 16.5 kg/vine on bilateral-trained, spur-pruned vines; quadrilateral training with spur pruning is recommended; tolerant but not resistant to powdery mildew.

Grape Rootstock

John R. Clark
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Georgian 28. A lime and drought tolerant rootstock. Origin: Keiszthely, Hungary, by László Kocsis, Eva Lehozcky, László Bakonyi, László Szabó, and Lajos Szke; 5BB x Vitis vinifera; not patented. Vine: high cane production; highly lime tolerant; drought tolerant; Ca²⁺ concentrations in leaf tissue were higher than other rootstock.

Nectarine

Jerome L. Frecon
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Candy Pearl. White-fleshed clingstone nectarine. Origin: LeGrand, California, by L.G. Bradford. Seedling of Red Glen (USPP7,193) x June Pearl (USPP9,360); introduced 21 Oct. 2003 as USPP14,249. Fruit: globose, uniformly large, very dark red skin over a strong red with pale orange yellow undercolor. Flesh very firm, crisp, white with a slight amount of red streaking at the stone, clingstone. Flavor sub-acid, sweet, excellent. Ripens in early July in LeGrand, Calif., or about 6 d after Kay Pearl. Tree: flowers large, showy, purplish, pink and self-fertile. Leaf glands reniform, 2 to 4 in number, mostly alternate. Tree is medium-sized, spreading, dense, vigorous, productive.


Earlhyoney. Yellow fleshed, clingstone, sub-acid nectarine. Origin: Modesto, Calif., by C.F. Zaiger, L.M. Gardner, G.N. Zaiger and G.G. Zaiger. Originated as a cross of two selected unnamed seedlings. Introduced 2 Mar. 2002 as USPP12,438. Fruit: globose, medium to large, Turkish red to cardinal red with small, randomly spaced areas of pale yellow to light yellow under color. Flesh firm, meaty butter yellow to maize yellow, clingstone. Flavor sweet, subacid, very good. Ripens early June in Modesto, Calif., or 12 d earlier than Honeykist nectarine. Tree: flowers; large, showy, pink to pastel pink. Leaf glands reniform, 1 to 4 alternate. Tree is large, vigorous, upright, productive. Chilling hours about 600.

Early Pearl. White-fleshed, clingstone nectarine. Origin: LeGrand, Calif., by L.G. ""
Bradford; Seedling of July Pearl (USPP10,293) x an unnamed nectarine seedling; Introduced on 23 Oct. 2003 as USPP14,248. **Fruit**: globose, uniform, medium, Very dark red over a strong red with slight light orange undercolor; Flesh moderately firm, crisp, white with a slight amount of red, clingstone. Flavor subacid, sweet, very good. Ripens in late May to early June in LeGrand, Calif., or 16 d earlier than June Pearl. **Tree**: flowers large, showy, pale purplish-pink, self-fertile. Leaf glands globose, 1 to 4 alternate. Tree is large, upright, vigorous, productive.

**Giant Pearl.** White-fleshed, subacidic, clingstone nectarine. **Origin**: LeGrand, Calif., by L.G. Bradford. Seedling of Summer Bright (USPP7,049) x an unnamed selected nectarine seedling. Introduced on 14 Oct. 2003 as USPP14,240. **Fruit**: globose, uniform, very large, dark red smoothly blending to moderate red on occasional pale yellow to light orange yellow undercolor. Flesh very firm, crisp, yellowish-white, clingstone. Flavor subacid, sweet, very good. Ripens early to mid August in LeGrand, Calif., or 10 d later than Fire Pearl. **Tree**: flowers small, nonshowy, light pink toward center with moderate purplish-pink toward the margin, self-fertile. Leaf glands reniform, 2 to 6 mostly alternately positioned. Tree is medium in size, vigorous, spreading and open, productive.

**September Bright.** Yellow-fleshed, clingstone nectarine. **Origin**: LeGrand, Calif., by L.G. Bradford. Seedling of August Red (USPP6,363) nectarine x an unnamed seedling near LeGrand. Introduced on 14 Jan. 2003 as USPP13,475. **Fruit**: globose to slightly oblate, large, symmetrical, very deep red mottled into strong red with some yellow undercolor. Flesh firm, crisp, brilliant yellow, clingstone. Flavor mildly acidic, sweet, very good. Ripens early September in LeGrand, Calif., or 2 weeks later than August Red. **Tree**: flower non showy, small, moderate purplish-pink, self-fertile. Leaf glands reniform, 2 to 4 alternately positioned. Tree is large, spreading and dense, vigorous, productive.

**Sweet Pearl.** White-fleshed, sub-acidic, freestone nectarine. **Origin**: LeGrand, Calif., by L.G. Bradford. Seedling of Red Glen (USPP7,193) x an unnamed white fleshed nectarine introduced on 21 Jan. 2003 as USPP13,495. **Fruit**: globose, asymmetrical, uniform, large. Very dark red smoothly blending into moderate red with yellowish white undercolor. Flesh firm, crisp, white, freestone. Flavor subacid, sweet, the best flavor. Ripens in early to mid July in LeGrand, Calif., or 7 d earlier than Grand Pearl. **Tree**: flowers large, showy, light purplish-pink, self-fertile. Leaf glands reniform 2 to 6 usually alternate occasionally opposite. Tree is medium size, vigorous, spreading, dense, productive.

**Zee Fire.** Yellow-fleshed, clingstone nectarine. **Origin**: Modesto, Calif., by L.M. Gardner, G.N. Zaiger and G.G. Zaiger. Originated as a cross of two selected unnamed seedlings. Introduced 21 Jan. 2003 as USPP13,501. **Fruit**: globose to slightly concave on one side, large, mostly red with yellow undercolor. Flesh firm, meaty, yellow, clingstone. Flavor good, with good balance between sugar and acid. Ripens in late May in Modesto, Calif., or 6 d earlier than Mayglo. **Tree**: flowers large, showy, rich pink, self-fertile. Leaf glands reniform, large, 2 to 3 alternately positioned. Tree is large, vigorous, upright, productive with about 500 h chilling.

**PAWPAW**

Kim E. Hammer
USDA–ARS, National Clonal Germplasm Repository, Corvallis, Ore.

**Aidievate.** See Rappahannock.

**Levivi.** See Susquehanna.

**Rappahannock™ (Aidievate).** Large, consistently symmetrical fruit that harvests more easily than most pawpaws. **Origin**: developed by Neal Peterson of Peterson Pawpaws, Harpers Ferry W.Va. Seed was collected from Blandy Experimental Farm, Boyce, Va., BEF-30 open-pollinated, in 1982, selected at Wye Research and Education Center, University of Maryland, Queenstown, in 1994; part of the Pawpaw Foundation multi-state variety trials from 1995–2000; introduced in 2004. Tested as PPF 8-58. **USPPAF. Fruit**: medium, 200 g average and may exceed 280g; with few seeds (5.7% by weight); Fruit shape is symmetrically ovate, not flattened on one side as in most pawpaws; color of ripe fruit typically stands out from foliage, making harvest easier than other cultivars; flesh is bright creamy yellow and texture is very firm, sometimes rubbery; flavor is good, though not as good as that of "Shenandoah™"; Bitx: 19%; fruit is often borne in single-fruited clusters but can be in 2-, 3-, or many-fruited clusters; yield is good, similar to that of Shenandoah™. **Plant**: very vigorous, horizontal leaf habit. Flower is larger than most. Subject to vigorous growth after pruning; Midseason flowering and midseason ripening, 5 to 14 Sept. in Queenstown, Md. Somewhat resistant to pawpaw decline. Subject to fruit cracking. Named for the Rappahannock River of Virginia.

**Shenandoah™ (Wansewvan).** Large, fr-Grant fruit with smooth, crustad textured flesh. **Origin**: developed by Neal Peterson of Peterson Pawpaws, Harpers Ferry, W.Va. Seed was collected from Overleese open-pollinated, in 1982; selected at Wye Research and Education Center, University of Maryland, Queenstown, in 1994; part of the Pawpaw Foundation multi-state variety trials from 1995–2000; introduced in 2004. Tested as PPF 1-7-1. **USPPAF. Fruit**: large, 250 g average and may exceed 350 g; with few seeds (5.4% by weight); shape ovoid-ovate though soft, is firmer than that of average wild pawpaw; color is very dark red blending into a moderate pink. Flesh firm, crisp, white, freestone. **USDA–ARS, National Clonal Germplasm Repository, Corvallis, Ore.**

Aidievate. See Rappahannock.

Levivi. See Susquehanna.

Rappahannock™ (Aidievate). Large, consistently symmetrical fruit that harvests more easily than most pawpaws. **Origin**: developed by Neal Peterson of Peterson Pawpaws, Harpers Ferry, W.Va. Seed was collected from Blandy Experimental Farm, Boyce, Va., BEF-30 open-pollinated, in 1982; selected at Wye Research and Education Center, University of Maryland, Queenstown, in 1994; part of the Pawpaw Foundation multi-state variety trials from 1995–2000; introduced in 2004. Tested as PPF 11-5. **USPPAF. Fruit**: very large, 300 g average and may exceed 450 g; few seeds (3.3% by weight). Fruit shape is broadly ellipsoidal to nearly spherical. Flesh is creamy orangish-yellow and has a firm, buttery texture, resembling that of Haas avocado; flavor is very sweet, rich and fruity; Bitx 26%; fruit is borne not infrequently as single-fruited clusters but more often as 2-, 3-, or many-fruited clusters; has a thick, moderately tough skin and handles better than other pawpaws; yield is moderate, usually less than that of Shenandoah™. **Plant**: vigorous, ornamental tree with landscape potential; responds well to pruning. Petioles are shorter than usual for the species. Adaxial surface of young and mature leaves is distinctly rugose. Midseason flowering and mid- to late season ripening, 12 to 27 Sept. in Queenstown, Md. Susceptible to pawpaw decline. Named for the Susquehanna River that flows from New York, through Pennsylvania into the Chesapeake Bay in Maryland.

**Wansewvan.** See Shenandoah.

**PEACH**

Jerome L. Frecon
Rutgers Cooperative Extension, New Brunswick, N.J.

**AgriPeachOne.** White-fleshed, low acid, mid-season flat peach. **Origin**: Selma Calif., by George Howard. Open pollinated seedling of N.J. F-2 cultivar (USPP5,123). Introduced on 5 Nov. 2002 as USPP13,175. Assigned to Agri Sun Nursery LLC. **Fruit**: vertically flattened, round, medium to large, mostly dark red with some light red. Flesh white semi-freestone. Flavor very mild and low-acid taste. Ripens in mid-July in Selma 18 to 21 d after N.J. F-2. **Tree**: flower large, showy, very light pink. Leaf glands reniform, opposite. Moderately spreading, very vigorous, large, productive tree. Chilling is believed to be 600 to 1000 h.

**August Princess.** White-fleshed, sub-acidic clingstone peach. **Origin**: LeGrand, Calif., by L.G. Bradford. Seedling of August Red (USPP6,363) x White Princess (USPP9,515), Introduced on 27 Aug. 2002 as USPP12,896. **Fruit**: uniform, globose, large, skin is dark red blending into a moderate pink. Flesh firm, crisp, white, clingstone. Flavor sub-acid, sweet, very good. Ripens in late August in LeGrand or about 10 d after White Princess. **Tree**: flowers large, showy, pale purplish pink, self-fertile. Leaf glands opposite, globose. Tree upright and dense, vigorous, large, very productive.


**Candy Red.** Yellow-fleshed sub-acid, clingstone peach. *Origin:* LeGrand, Calif., by L.G. Bradford. Seedling of Crown Princess (USPP7,070) x unnamed white fleshed nectarine. Introduced on 1 Oct. 2002 as USPP13,040. **Fruit:** globose to slightly elongate, large; dark red blending to a darkish red orange. Flesh firm, melting, brilliant yellow, clingstone. Flavor sub-acid, sweet, very good. Ripens early to mid June in LeGrand or about 6 d after Crown Princess. **Tree:** Flowers large, showy, pale purplish pink, self-fertile. Leaf glands opposite, reniform. Tree upright, vigorous, medium in size, medium productivity.

**Ice Princess.** White-fleshed sub-acid freestone peach. *Origin:* LeGrand, Calif., by L.G. Bradford. Self-pollinated seedling of Ivory Queen (USPP11,205). Introduced on 21 Jan. 2003 as USPP13,496. **Fruit:** globose with slight axial compression, medium, uniform. Very dark red smoothly blending into moderate red. Flesh firm, crisp, yellowish white, clingstone. Flavor very good, sub-acid, sweet. Ripens over 2-week period from mid to late June in LeGrand or 10 d later than Ivory Princess. **Tree:** flowers large, showy, pale purplish pink, self-fertile. Leaf glands globose when immature to reniform when mature, alternate. Upright, medium size, vigorous, very productive.

**Ivory Queen.** White-fleshed peach sub-acid clingstone peach. *Origin:* LeGrand, Calif., by L.G. Bradford. Self-pollinated seedling of Ivory Queen (USPP11,205). Introduced on 21 Jan. 2003 as USPP13,496. **Fruit:** globose with slight axial compression, medium, uniform. Very dark red smoothly blending into moderate red. Flesh firm, crisp, yellowish white, clingstone. Flavor very good, sub-acid, sweet. Ripens over 2-week period from mid to late June in LeGrand or 10 d later than Ivory Princess. **Tree:** flowers large, showy, pale purplish pink, self-fertile. Leaf glands globose when immature to reniform when mature, alternate. Upright, medium size, vigorous, very productive.

**PF Lucky 13.** Yellow-fleshed, nonmelting freestone peach. *Origin:* Coloma, Mich., by Paul Friday. Unknown seedling. Introduced in December 2003 as USPP14,384. **Fruit:** globose, large, 60% to 80% red over light yellow. Flesh light yellow with red around pit, very firm, nonmelting, freestone. Flavor excellent. Ripens 5 d after Redhaven in Coloma, Mich. **Tree:** flowers medium, nonshowy, light pink, self-fertile. Leaf glands 1 to 5 usually 2. Spreading tree of medium vigor, very productive.

**PF 35-007.** Yellow-fleshed, nonmelting freestone peach. *Origin:* Coloma, Mich., by Paul Friday. Unknown seedling. Introduced in December 2003 as USPP14,368. **Fruit:** globose, large, 80% red over light yellow. Flesh light pinkish-yellow with red around pit, very firm, nonmelting, freestone. Flavor excellent. Ripens 5 d after Encore peach in Coloma, Mich. **Tree:**
Texas, in the early 1980s. Origin: Keilers was interested in patenting the selection, but that was not pursued. Graftwood was shared with the USDA—ARS Pecan Station in Brownwood, Texas, in 1983 under the name Keilers. He also shared graftwood with John Haschke of Harwood, Texas, who shared it with Fred Stockbauer of Victoria, Texas. Stockbauer was impressed with nut size and quality of the selection and began propagating it in the early 1990s, and it began to be called Stockbauer. Graftwood of Stockbauer came in 1994 to the pecan collections of the USDA—ARS National Clonal Germplasm Repository, established in 1984 to include collections of the Brownwood station. Analyses using eight microsatellite primers showed the two accessions to be identical. They have indistinguishable nut characters, dichogamy and disease reactions. Keilers was assigned Plant Introduction number (PI) 518067.

**Nut:** obovate to elliptic, blocky with obtuse apex and base, often with a slight point at base; prominent thick, dark stripes at apex; round in cross section; 42 nuts/lb, 60% kernel; kernels golden to light brown, with medium, slightly tapered dorsal ridge, relatively narrow dorsal grooves; flat basal cleft; deep, usually open ventral groove. **Tree:** protogynous with midseason pollen shed and early pistillate receptivity. Susceptible (rated 3 on 1 to 5 scale, 5 = most susceptible) to pecan scab Scab. Nuts germinate well and seedlings are uniform and vigorous.

**PLUM AND PLUM HYBRIDS**

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**Aphrodite.** A firm, large Santa Rosa-like Japanese plum. **Origin:** Fresno, Calif., by Giovanna B. Bubani. Shoyama x Santa Rosa made in 1991. Selected in 1994. USPP13,121 issued 22 Oct. 2002. **Fruit:** large, 59 to 66 mm diameter, oval to slightly ovate; skin is red-purple with numerous dots and speckles; flesh, light yellow, firm, flavor like Santa Rosa; cling; ripe the third week of June, few days after Santa Rosa. **Tree:** good vigor, upright to slightly spreading, good and regular production, early blooming.

**Autumn Yummy.** A late-ripening, black-red skin, yellow-red flesh Japanese plum. **Origin:** Le Grand, Calif., by L.G. Bradford. Freedom o.p. Seed collected 1998. USPP14,178 issued 23 Sept. 2003. **Fruit:** large, 68 mm diameter, 179 g; globose to slightly olate; skin is blackish red; flesh light yellow-orange with abundant red flecking and streaking, very firm, crisp, very good flavor, 17% to 21% SS; cling; ripe second week of September. **Tree:** large, vigorous, upright; very productive, heavy bloom with abundant pollen, self-inferfertile, midseason blooming, with Blackamere and Angelino.

**Black Kat.** A late-ripening, complex interspecific hybrid with blue-black, glabrous skin. **Origin:** Modesto, Calif., by Chris F., G.N. and G.G. Zaiger and L.M. Gardner. 73ED135 = [unknown plum x Autumn Giant plum] x 72GC211 = [unknown plum x 46G865 plumcot] = (Red Bea x unknown apricot). USPP12,856 issued 13 Aug. 2002. **Fruit:** large, 55 to 60 mm diameter, 145 g; globose; skin is blue-black, glabrous; flesh yellow, firm, medium texture; cling; ripe the first week of September, 10 d after Flavorosa. **Tree:** medium, vigorous, upright; heavy and regular production, self-inferfertile, abundant pollen, blooming 19 Feb. in Modesto, 1 week after Flavorosa.

**Crimson Heart.** An early-ripening, complex interspecific hybrid with violet-brown, glabrous skin. **Origin:** Modesto, Calif., by C.F., G.N. and G.G. Zaiger and L.M. Gardner. 59EF110 = [complex hybrid with plum and apricot parents] x ‘Plum Parfait’ plumcot. USPP12,943 issued 10 Sept. 2002. **Fruit:** large, 57 to 60 mm diameter, 128 g; globose; skin is violet-brown, glabrous; flesh red, firm, 15.5% SS; cling; ripe the fourth week of 7 May to 10 d after Flavorosa. **Tree:** large, vigorous, upright; heavy and regular production, self-inferfertile, abundant pollen, blooming 22 Feb. in Modesto.

**Danae.** A late, dark purple to burgundy skin, red-flesh Japanese plum. **Origin:** Parlier, Calif., by G. Flagler. Showtime o.p. USPP13,740 issued 29 Apr. 2003. **Fruit:** medium, 55 to 57 mm diameter; globose; skin is dark purple to burgundy; flesh red, firm; free; ripe the first week of September, 3 to 5 d before Angelino. **Tree:** medium, vigorous, upright to spreading; bloom 19 to 20 Feb., anthers sea green.

**Dapple Fire.** An early-ripening, complex interspecific hybrid with reddish brown, glabrous skin. **Origin:** Modesto, Calif., by C.F., G.N. and G.G. Zaiger and L.M. Gardner. 150LB5 = [unknown plum x Red Bea x unknown nectarine] x 14GD64 = (O’Henry o.p. x Red Bea x unknown apricot). USPP12,409 issued 12 Feb. 2002. **Fruit:** large, 57 to 63 mm diameter, 142 g; globose to slightly elongated; skin is reddish brown, glabrous; flesh red, firm, 17.5% SS, very good flavor and eating quality; cling; ripe the first week of July, 2 weeks before Dapple Dandy. **Tree:** large, vigorous, upright; heavy and regular production, self-inferfertile, blooming 28 Feb. in Modesto, chilling requirement is 750 h at 7 °C.

**Early Danae.** A very early-ripening, purple-skin, yellow-gold flesh Japanese plum. **Origin:** Parlier, Calif., by G. Flagler. Showtime o.p. USPP14,019 issued 29 July 2003. **Fruit:** medium large, 48 to 57 mm diameter, globose; skin is uniform purple; flesh yellow-gold; medium firmness; semi-free; ripe the third week of May, 1 week before Early Bea and three to four weeks before Showtime. **Tree:** medium, good vigor, upright and spreading; good to very good and regular production, bloom mid late to 19 to 20 Feb., abundant bloom.

**Early Dapple.** An early-ripening, complex interspecific hybrid with red mottled, glabrous skin. **Origin:** Modesto, Calif., by G.N. and G.G. Zaiger and L.M. Gardner. 369LD348 = [plum x plumcot, parents include Red Bea] x 352L7C47 = [Plum x plumcot x [(apricot x plum) x plumcot] = (plum x plumcot), parents include Patterson apricot and Flavor Supreme plum interspecific. USPP13,530 issued 28 Jan. 2003. **Fruit:** large, 65 mm diameter, 153 g; globose; skin is yellow-red ground overspread with blotched of red to produce a mottled appearance, glabrous; flesh red, firm, good eating quality, 16.4% SS; cling; ripe the third week of June, 8 d before Flavor Supreme or 20 d after Red Bea. **Tree:**

**Light Red**, firm, meaty texture, 15.8% SS; cling; the first to second week of July, 2 weeks before Dallari. **Tree:** large, vigorous, upright; heavy and regular production, self-inferfertile, blooming 22 Feb. in Modesto.
medium to large, vigorous, upright; heavy and regular production, self-infertile, blooming 28 Feb. in Modesto, chilling requirement is 650 h at 7 °C.

Flavor Grenade. An early-ripening, complex interspecific hybrid with yellow, glabrous skin and red blush. Origin: Modesto, Calif., by C.F., G.N. and G.G. Zaiger and L.M. Gardner. 7HC244 = [Mariposa x (plumcot = (Red Beaux t.o.p.) x plumcot = (Red Beaux t.o.p.))] x Flavor Queen. USPP12,097 issued 18 Sept. 2001. Fruit: medium, 63 mm diameter 120 g, slightly elongated; skin is yellow covered with red blush, glabrous; flesh yellow, very firm, crisp, 22% SS; excellent eating quality; semi-ripe; free the first week of August. 15 d after Flavor Queen. Tree: large, vigorous, upright; precocious, heavy and regular production, self-infertile, blooming 20 Feb. in Modesto, chilling requirement is 600 h at 7 °C.

Flavor Jewel. An early-ripening, complex interspecific hybrid with red, glabrous skin. Origin: Modesto, Calif., by G.N. and G.G. Zaiger and L.M. Gardner. Unnamed seedling = [C48ED292 = [(King David plum x plumcot = (Red Beaux t.o.p.))] x 105GD55 = (hybrid with Friar, Mariposa and Ebony plums as parents))] o.p. USPP13,502 issued 21 Jan. 2003. Fruit: large, 66 mm diameter, 159 g, cordate; skin is red, glabrous; flesh yellow with red under skin, firm, 18.3% SS; cling; ripe the second week of August, 2 weeks after Friar. Tree: large, vigorous, upright; heavy and regular production, self-infertile, blooming 25 Feb. in Modesto, chilling requirement is 800 h at 7 °C.

Flavor Treat. A late-ripening, complex interspecific hybrid with garnet red, glabrous skin. Origin: Modesto, Calif., by C.F., G.N. and G.G. Zaiger and L.M. Gardner. 82EG355 = (complex hybrid with plum, apricot and peach parents) x 324LF168 = (complex hybrid with plum and apricot parents). USPP12,936 issued 10 Sept. 2002. Fruit: large, 69 to 72 mm diameter, 270 g, globose; skin is garnet red, glabrous; flesh light yellow to yellow, firm, 19.6% SS; cling; ripe the first week of September, 3 weeks after Flavor Gem. Tree: large, vigorous, upright; heavy and regular production, self-infertile, blooming 27 Feb. in Modesto.

Jayfree Plum. A European plum with freestone, nonshattering pit, for fresh-market and processing. Origin: Geneva, N.Y., by J.P. Watson, Cornell University. Valor x Iroquois. Selected in 1975 and tested as NY66.609.6. USPP13,851 issued 17 June 2003. Assigned to Cornell Research Foundation, Inc. Fruit: large, 43 to 48 mm diameter, 48 to 63 mm long, roundly elongated; skin is gray-purple with heavy bloom; flesh yellow-orange, medium firm, 14% SS, produces highly colored processed plum products of excellent quality; free; ripe last week of August. Tree: medium, medium vigor, spreading; very productive, precocious, nonshowy flower with abundant pollen, self-fertile, midseason blooming. Disease: above avg. tolerance, immune to prune leafcasting mottle physiological disorder, good cold hardiness.

Kenmore Plum. A European plum with freestone, nonshattering pit, for fresh-market and processing. Origin: Geneva, N.Y., by J.P. Watson, Cornell University. Standard x Stanley. Selected in 1971 and tested as NY58.900.9. USPP14,020 issued 29 July 2003. Assigned to Cornell Research Foundation, Inc. Fruit: large, 40 to 45 mm diameter, 52 to 60 mm long, elongated; skin is gray-purple; flesh yellow, medium juicy, elastic, tough texture, 14% SS, produces highly colored processed plum products of excellent quality; tree; ripe first week of September. Tree: medium large, vigorous, upright; very productive, nonshowy flower with abundant pollen, self-fertile, mid-season blooming. Disease: above avg. Black knot tolerance, brown rot tolerance of blossom and fruit, European red mite tolerance, immune to prune leafcasting mottle physiological disorder.


Red Majesty. An early-ripening, red-skin, yellow-flesh Japanese plum. Origin: Le Grand, Calif., by L.G. Bradford. Unnamed plum seed. Seed collected 1992 and selected in 1997. USPP13,497 issued 21 Jan. 2003. Fruit: large, 64 mm diameter, 132 g, oblate; skin is bright red with numerous small freckles; flesh yellow, spongy texture with good flavor, 14% SS; cling; ripe the third week of June, 8 d before Santa Rosa. Tree: medium, vigorous, upright; good and regular production, self-infertile, with abundant pollen, Laroda and Wickerson are pollinators.

Rosy Jewel. An early European plum. Origin: Fresno, Calif., by J.M. Garabedian and M.H. Stewart. Unknown plum o.p. USPP13,052 issued 8 Oct. 2002. Fruit: medium to large, 55 to 60 mm diameter, round; skin is dark burgundy; flesh pale green; semi-free; ripe the last week of May and first week of June in Fresno. Tree: large, medium vigor, upright, good and regular production.

Royal Treat. An early-ripening, complex interspecific hybrid with dark magenta, glabrous skin. Origin: Modesto, Calif., by G.N. and G.G. Zaiger and L.M. Gardner. 33ED7 = (Laroda x Queen Ann) x unknown plumcot. USPP13,505 issued 21 Jan. 2003. Fruit: medium to large, 57 mm diameter, 90 g, globose; skin is dark magenta, glabrous; flesh yellow, firm, 14.8% SS; cling; ripe the second week of June, 30 d before Laroda. Tree: large, vigorous, upright; good and regular production, self-infertile, blooming 28 Feb. in Modesto, chilling requirement is 700 h at 7 °C.


Sierra Rose. A mid-late ripening, complex interspecific hybrid with brownish violet, glabrous skin. Origin: Modesto, Calif., by G.N. and G.G. Zaiger and L.M. Gardner. 326LC131 = (complex hybrid with Friar and Autumn Giant plum and a plumcot seedling parents) x 391LD449 = (Modesto apricot x plumcot = unknown apricot). USPP13,687 issued 25 Mar. 2003. Fruit: large, 64 mm diameter, 198 g, globose; skin is brownish violet speckled pattern, glabrous; flesh yellow, firm, excellent flavor, 16% SS; cling; ripe the second week of August, 20 d after Friar. Tree: large, vigorous, upright; good and regular production, self-infertile, blooming 19 Feb. in Modesto, chilling requirement is 600 h at 7 °C.


Suplumwenthtwo. A very early-ripening, black skin, red and yellow flesh Japanese plum. Origin: Bakersfield, Calif., by B.D. Mowrey and D.W. Cain. Pedigree is 91P-001. Crossed in 1993 and selected in 1996. USPP13,171 issued 5 Nov. 2002. Assigned to Sun World International, Inc. Fruit: large, 60 mm diameter, oblate; skin is black; flesh yellow at pit and red in rest of flesh, smooth crisp texture, mild sweet flavor, 16.5% SS; cling; ripe the third week of May, with Red Beaux. Tree: medium vigor,
semi-upright; good and regular production, midseason blooming.

Tasty Rich. An early-ripening, complex interspecific hybrid with apricot appearance. Origin: Modesto, Calif., by C.F., G.N. and G.G. Zaiger and L.M. Gardner. Unknown apricot x 7HC43 = [78E870] = [Flaming Gold apricot o.p.] x pluocot = [Red Beaut o.p.,] x Royal Zee plum. USPP12,774 issued 16 Jul. 2002. Fruit: medium to large, 49 to 51 mm diameter, 80 g, globose; skin is yellow-orange, pubescent; flesh light yellow-orange, 14.2% SS, excellent flavor and eating quality, flavor like apricot; tree; ripe the first week of May, 2 weeks before Honkey Rich apricot. Tree: large, vigorous, semi-spreading; heavy and regular production, self-in fertile, blooming 20 Feb. in Modesto, chilling requirement is 700 h at 7°C.


Yummyrosa. An early-ripening, dark red skin, yellow-tored flesh Japanese plum. Origin: Le Grand, Calif., by L.G. Bradford. 19P442 = [Black Beaut o.p.] seed collected 1993 and selected in 1998. USPP13,476 issued 14 Jan. 2003. Fruit: medium, 62 mm diameter, 139 g, globose; skin is dark red with moderate freckling; flesh yellow to red, firm, juicy with excellent flavor, 16% to 18% SS; cling; ripe the last week of June, 2 weeks after Black Beauty. Tree: large, vigorous, upright; good and regular production, self-fertile, midseason blooming.

Krymsk 1TM. A clonal Prunus tomentosa x P. cerasifera hybrid rootstock for peach. Origin: developed by G. Eremian at the Vavilov Research Institute in Krymsk, Russia. Released in 1996 for testing as VVA-1. Tree: Krymsk 1 is easily propagated by softwood and hardwood cuttings. Trees budded to Krymsk 1 are well anchored and more cold and drought tolerant than trees on peach seedling. Budged tree size is ca 60% of that on peach seedling. Krymsk 1 is not tolerant of drought but is tolerant of heavy, wet soils. Compatible with most apricots, most European plums and some Japanese plums. (Goodfruit Grower 49(10):11; 1998).

Krymsk 86TM. A clonal Prunus cerasifera x P. persica hybrid rootstock for peach. Origin: developed by G. Eremian at the Vavilov Research Institute in Krymsk, Russia. Released in 1986 for testing as Kuban 86. Tree: Krymsk 86 is easily propagated by softwood and hardwood cuttings. Krymsk 86 is nonsuckering and tolerant of calcareous soils. Trees budded to Krymsk 86 are more cold tolerant and precocious than trees on standard peach seedling. Budged tree size is about 80% of that on peach seedling. Krymsk 86 is more tolerant of waterlogging than peach seedling. Compatible with most almonds, apricots, European plums and Japanese plums. (Goodfruit Grower 49(10):11; 1998).

RASPBERRY

Dubh Haunaub

Alice. A yellow primocean fruiting red raspberry, the first with Rubus sumatranus in its derivation, adapted to cooler regions of Mid-Atlantic States. Origin: University of Maryland; Virginia Polytechnic Institute and State University, Rutgers University and University of Wisconsin by H.J. Swartz, H. Stiles, J. Fiola, and B. Smith; (Hedge x Rubus sumatranus) x Anne; cross made in 1994; selected 1996; tested as V0M 1A0; introduced in 2003; not patented. Fruit: smaller than Anne and less cohesive; moderate firmness in cooler regions; excellent flavor; ripens September to October. Plant: more productive than Anne; very vigorous; canes branch; moderate primocane production; adapted to a wide range of soil types.

Brice. An extremely early ripening primocane fruiting red raspberry. Origin: Medway Fruits and Redeva, Oatham, Kent, U.K., by D.L. Jennings. Parents include Joan Squire and a complex hybrid involving Joan J., Glen Moy, and Autumn Bliss; cross made 1999; patented U.K. Fruit: large; conic; firm; medium red; good flavor; in southern U.K. crops from second week of August to first week of October. Plant: sturdy, erect, spine-free canes of medium vigor; well suited to production in tunnels.

Cascade Delight. A productive, floricanoe fruiting, late-ripening fresh market red raspberry adapted to the Pacific Northwest. Origin: Washington State University, Puyallup, by P.P. Moore. Chiiliwack x WSU 994; cross made 1989; selected 1992; tested as WSU 1090; introduced in 2003; USPPAF Fruit: very large; long conic; very firm; glossy and slightly redder that Tulameen; releases easily from receptacle. Plant: very vigorous with long fruiting laterals which make it unsuitable for machine harvesting. Susceptible to raspberry bushy dwarf virus and to the North American vector of the raspberry mosaic virus complex, the aphid Amorphophora agathonica; field tolerance to root rot caused by Physophthora fragariae var. rubi.

Deborah. A primocane fruiting red raspberry adapted to the mid-Atlantic region. Origin: University of Maryland, Virginia Polytechnic Institute and State University, Rutgers University and University of Wisconsin by H.J. Swartz, H. Stiles, J. Fiola; B. Smith; (Amosh H x NY 817) x Caroline; cross made in 1993; selected 1995; tested as ND-II; introduced in 2003; not patented. Fruit: very large; conic; cohesive; soft at high temperatures; good flavor; ripens September to October. Plant: moderately productive; vigorous; moderate cold hardness if spring cropped. Less susceptible to yellow rust than Heritage.

Esquimalt. A very late ripening fresh market floricanoe fruiting red raspberry adapted to the Pacific Northwest. Origin: Pacific Agriculture Research Centre, Agassiz, B.C., Canada by C. Kempler and H.A. Daubeny; BC82-5-84xTulameen; cross made 1989 by HAD; selected 1992 by HAD; tested as BC 89-33-84; introduced in 2003; propagated under a royalty agreement with Pacific Northwest propagators. Fruit: large; conic; firm; glossy medium red; releases easily from receptacle and suitable for machine harvest; especially good for production of raspberry liquor. Plant: vigorous. Susceptible to raspberry bushy dwarf virus and to the North American vector of the raspberry mosaic virus complex, the aphid Amorphophora agathonica; some field tolerance to the root rot caused by Physophthora fragariae var. rubi.
not suitable for machine harvest; ripens 5 to 7 d later than Tulameen. **Plant:** very vigorous with upright habit; abundant long and thick primocanes that are light green color with no spines; floricanes gray brown color with silvery shine; very little cracking; short very upright, strongly attached fruit laterals with well spaced fruit; winter hardy in coastal Pacific Northwest. Relatively susceptible to spur blight and to cane **Botrytis**; resistant to anthracnose; susceptible to raspberry bushy dwarf; resistant to the North American vector of the raspberry mosaic virus complex, the aphid, *Amphorophora agathonica*; relatively susceptible in the field to root rot caused by *Phytophthora fragariae* var. **rubii**.

**Fertodi aranyfur**. A large, yellow floricanes fruiting red raspberry. **Origin:** Fertod Research Institute of Fruit Growing, Sarrod, Hungry by L. Kollanyi; [(Malling Exploit x Mitra) x (St. Walfried x Yellow Antwerp)]; selected 1983; introduced in 2001. **Fruit:** large; medium firm yellow turns to orange when over ripe; sweet flavor; early to midseason ripening. **Plant:** vigorous; moderately productive. Moderately susceptible to leaf spot.

**Fertodi karmin (Marla).** A high yielding, spur blight resistant floricanes fruiting red raspberry. **Origin:** Fertod Research Institute of Fruit Growing, Sarrod, Hungry by L. Kollanyi; Canby x F. 6210/120; cross made 1971; selected 1976; tested as F. 6348/47; introduced in 2000. **Fruit:** medium to large; conic; light red; good sweet flavor; early ripening; suited to fresh market. **Plant:** vigorous upright canes. Resistant to leaf spot; susceptible to nonfumigated chalky soil in Italy. Adria. **Plant:** medium large; regular conic shape with blunt top; ripens 10 to 14 d after Autumn Bliss; season lasts 6 to 8 weeks and under tunnels until late October. **Plant:** productive; strong and very vigorous canes; fewer primocanes that Autumn Bliss. Similar reaction to **Phytophthora**-induced root rot as Autumn Bliss.

**Kaituna.** A high yielding floricanes fruiting red raspberry adapted to New Zealand. **Origin:** HortResearchCentre, Motueka N.Z., by H. Hall; SCRI 8216B6 x SCRI 795N10; cross made 1986 at Scottish Crop Research Institute by D.L. Jennings; seedlings grown in N.Z.; selected 1989 by H. Hall; tested as 86107P2.7; patented. **Fruit:** conic; firm; light color; good flavor; fresh market; somewhat difficult to remove from receptacle. **Plant:** vigorous; semi upright canes that are genetically spineless.

**Marla.** See Fertodi karmin.

**Motueka.** A high yielding floricanes fruiting red raspberry adapted to New Zealand. **Origin:** HortResearch Centre. Motueka N.Z., by H. Hall; F29 (Marcy x Malling Delight) x B257 (open pollinated selection from Scottish Crops Research Institute); cross made 1989; tested as F. 6348/47; introduced in 2000. **Fruit:** medium to large; conic; light red; good sweet flavor; early ripening; suited to fresh market. **Plant:** vigorous upright canes. Resistant to leaf spot; susceptible to nonfumigated chalky soil in Italy.

**Octavia.** A very late ripening floricanes fruiting fresh market red raspberry adapted to the U.K. **Origin:** Horticultural Research International-East Malling, by Victoria Knight; Glen Ample x EM 592/114; cross made 1992; selected 1996; tested as 6512/50; introduced in 2002; European Union PBR. **Fruit:** medium to large, relatively uniform size; blunt conic to round; firm and cohesive; fairly good color; good flavor; releases easily from receptacle; good shelf life with greater firmness and less post harvest rot than Tulameen and with drupelets maintaining uniform color; ripens 10 to 14 d later than Tulameen and Glen Ample and season overlaps primocane fruiting varieties. **Plant:** higher yielding than Tulameen and the same as Glen Ample; vigorous new canes, reasonably good habit; crops to base of cane; laterals fairly upright; moderately leafy with fruit slightly clumped at lateral tip; spines on new canes are not objectionable. Moderately resistant to cane **Botrytis** and to cane spot; susceptible to spur blight; resistant to strains 1 to 4 of the European vector of the raspberry mosaic virus complex, the aphid *Amphorophora idaei*; susceptible to a resistant-breaking isolate of raspberry bushy dwarf virus but slow to become infected; has not been tested for raspberry rot rot caused by *Phytophthora fragariae* var. **rubii**.

**Pequot.** A very cold-hardy raspberry. **Origin:** Developed by Jim Fruth of Brambleberry Farm, Pequot Lakes, Minn., by purchasing about 40 L of black raspberry fruit from a zone 5 farmers market, freezing the still-wet extracted seeds at –34 °C, and planting the seed. Selected from a group of 30 seedlings that survived the following spring. **Fruit:** Berry size similar to Latham Red Raspberry. Bears in July and the fruiting season is about three weeks. **Plant:** Hardy in USDA zone 3. Has borne a crop after –42 °C. Berries firm; shippable; remain intact after 10 to 14 d when held between 1 and 6 °C. Resistant to most **Rubus** diseases. Responds well to foliar feeding. Tissue cultured plants available starting in Fall 2004, from Hartmann Plant Co., Lacota, Mich.

**Rafzaq.** See Himbo-Top.

**Tadmor.** A high yielding, multi-purpose floricanes fruiting red raspberry adapted to New Zealand. **Origin:** HortResearch Centre, Motueka, N.Z., by H. Hall. Waimena x Lewis; cross made 1990; tested as HR59; patented. **Fruit:** large size maintained throughout season; firm; light to medium red; releases almost as easily from receptable as Skeena and is suitable for machine harvest; late ripening; suitable for fresh market and for processing. **Plant:** vigorous; basal spines on canes which are not quite as upright as Skeena. Appears to escape raspberry bushy dwarf virus.

**Waimena.** A floricanes fruiting processing red raspberry, the first with **Rubus piletinus** in its derivation, adapted to New Zealand. **Origin:** HortResearch, Nelson Research Centre, Motueka, N.Z., by H. Hall; SCRI 795B10 x SCRI 82224D4; cross made 1986 at the Scottish Crop Research Institute by D.L. Jennings; seedlings grown in N.Z.; selected in 1989 by H. Hall; tested as 86105N4.4; patented. **Fruit:** medium size; releases easily from receptacle; good quality for processing. **Plant:** medium size; long and thick canes; moderately vigorous; strong genetically spineless canes. Has remained free of raspberry bushy dwarf virus in New Zealand and in British Columbia where it has been trialed.

**STRAWBERRY**

**Chad Finn**

**USDA—ARS, HCR.L.Northwest Center for Small Fruit Research, Corvallis, Ore.**

**Adria.** A June bearing cultivar adapted to nonfumigated chalky soil in Italy. **Origin:** Ancona (Marche region), Italy, from the public breeding activity of the Italian National Project Frutticolture, mainly financed by the Ministry of Agriculture, and coordinated by W. Faedi—Istituto Sperimentale per la Frutticolture B Forlì Section. Granda x Miss; cross made in 1994; selected at Ancona in 1995 by B. Mezzetti and G. Murrli (DiBiAGA-Univ. Polit. Marche, Italy); tested as AN94.153.51; introduced in 2003 (CPVO application No. 2003/1797). **Fruit:** medium large; regular conic shape with blunt or rounded tip; yellow, medium-size, achenes; bright red color; red firm flesh; medium quality and nutritional value. **Plant:** short-day type; medium crown number; medium strong vigor; high uniformity and productivity; late blooming and harvesting time (+ 1 Day) in the central-north climatic conditions.

**Alisal.** A short-day cultivar with fruit of medium red color and conic shape that is adapted to summer production along the central coast of California. **Origin:** B.D. Mowrey, J.F. Coss, L.T. Kodama, J.I. Espejo, Jr., and
T.M. Sjulin, Driscoll Strawberry Associates, Inc., Watsonville, Calif. R2 x Key Largo; selected in 1994 in Monterey County, Calif.; USPP11,639 issued 21 Nov. 2000; assigned to Driscoll Strawberry Associates, Inc. **Fruit:** large; mostly conic shape, most similar to Commander, but slightly smaller, redder and more variable in shape; internal color is pale red, similar to Commander; flavor is slightly better than Commander. **Plant:** more vigorous and upright than Commander, with denser foliage. Production volume is similar to Commander but has greater late-season yield. Plants are moderately resistant to powdery mildew but susceptible to verticillium wilt (Verticillium dahliae) and bacterial angular leafspot disease (Xanthomonas fragariae).

**Bish.** A productive, midseason, short-day cultivar adapted to plasticulture from the mid-South and southern Appalachians to the mid-Atlantic regions of the eastern U.S. **Origin:** North Carolina State University, Raleigh, by J.R. Ballington. FL 87-20 x Delmarvec; cross made in 1994; selected in 1995; tested as NCR 95-08; rel. in 2002. **USPPAF.** **Fruit:** midseason, season very similar to Camarosa; shape blunt-conic (on primaries) to conic; yield similar to Chandler and Camarosa; fruit size similar to Chandler; equal to or better than Chandler for all fruit characteristics except flesh color; flavor better than Camarosa, and equal to or better than the latter cultivar for attractiveness, symmetry and skin color; flesh color, fruit firmness and skin toughness satisfactory, but not equal to Camarosa; early; vigorous; day-neutral; semi-erect and more compact and dense than Cal Giant 3; displays extraordinary tolerance to fruit, foliar, and soilborne diseases. Extraordinary tolerance to verticillium wilt, Phytophthora sp., Rhizoctonia, and Pythium. Exceptional tolerance to powdery mildew, Colletotrichum, and angular leaf spot. Some what tolerant to Botrytis cinerea. Impervious to two-spot spider mite (Tetranychus urticae) and European red mite.

**Cal Giant 3 (Galante).** An exceptionally firm yet succulent cultivar with very good flavor and disease tolerance that is proving adapted to many locations internationally. **Origin:** D.W. Small. California Giant, Inc., Watsonville, Calif. F39.1 x F15.1; cross made in 1997; selected in 1999; USPPAF 10/27/2416 in 2002; assigned to California Giant, Inc. Registered as Galaxia in Europe and Israel. **Fruit:** exceptionally firm and well-sized with good continuing size within the hand and from hand to hand; orange red color with good interior color saturation; very succulent with very good flavor; good rain tolerance, pollinating well in inclement weather and displaying good disease tolerance, Camino Real x Cal Giant 4; semi-erect and angular bearing tendency allows for very good late season production. **Plant:** short-day with a strong day-neutral tendency; more compact than Cal Giant 4 with very aggressive side-crown production. Cold hardy to at least –25°C with straw mulch. **Companion:** A new late season strawberry with large firm fruit adapted to the northeast and central U.S. and southeast and central Canada. **Origin:** developed by C.A. Weber, J.C. Sanford, and K.E. Maloney at Cornell University-NYSAES, Geneva, N.Y. MDUS 4774 x MDUS 5199; selected in 1989; tested as NYUS304B. **Fruit:** round-conic; dark red color; good flavor; firm flesh with good texture and eating quality; suitable for direct retail and wholesale; 2 to 3 d later harvest than Jewel; firmness and bruising ratings were equal to Jewel after 6 d at 1°C. Yields were similar to Jewel with larger fruit. **Plant:** vigorous; smaller, more compact, more upright than Coronado, with denser foliage, lower as a runner producer in nurseries; adapted to plasticulture. Resistant to anthracnose fruit rot (Colletotrichum acutatum). **Cal Giant 4 (Gloria).** A short-day cultivar that expresses extraordinary tolerance to foliar, fruit, and soilborne diseases; as well as producing very well shaped fruit; maintains good fruit size throughout the entire season; adapted well to various international locations. **Origin:** D.W. Small. California Giant, Inc., Watsonville, Calif. A41 x Seascape; cross made in 1994; selected in 1996; USPP12,423 issued 26 February 2002; assigned to California Giant, Inc. Registered as Gloria in Europe and Israel. **Fruit:** medium to long conic; very uniformly shaped; very uniformly sized within the hand and from hand to hand; darker exterior and interior color than Cal Giant 3; medium firmness; pollinates well in inclement weather; produces a good early crop and a strong ever-bearing tendency that allows for very good late season production; flavor is acceptable but less complete that Cal Giant 3. **Plant:** a short-day with a strong everbearing tendency; semi-erect and more compact and dense than Cal Giant 3; displays extraordinary tolerance to fruit, foliar, and soilborne diseases. Extraordinary tolerance to verticillium wilt, Phytophthora sp., Rhizoctonia, and Pythium. Exceptional tolerance to powdery mildew, Colletotrichum, and angular leaf spot. Some what tolerant to Botrytis cinerea. Impervious to two-spot spider mite (Tetranychus urticae) and European red mite.

**Canterbury.** A short-day cultivar with fruit of orange-red color, conic to chordate shape and high flavor that is adapted to late-winter through spring production along the south coast of California. **Origin:** A.Q. Amorao, A. Solís, Jr., and T.M. Sjulin, Driscoll Strawberry Associates, Inc., Watsonville, Calif. 9A264 x Balboa; selected in 1996 in Ventura County, Calif. USPP12,577 issued 23 Apr. 2002; assigned to Driscoll Strawberry Associates, Inc. **Fruit:** large; conic to chordeate shape, most similar to Coronado; lighter external skin color and redder flesh color than Coronado; flavor is mildly aromatic, much sweeter and less acidic than Coronado. **Plant:** more vigorous and upright than Coronado, with denser foliage; shorter inflorescence length than Coronado. Production is less than Coronado and slightly earlier. Moderately resistant to powdery mildew but susceptible to verticillium wilt and bacterial angular leaf spot disease.

**Clancy.** A productive, day neutral cultivar with excellent color that grows well in the Coastal area in the northern production area of California. **Origin:** developed by C. Crandall; Watsonville, Calif. Selva x Douglas; cross made in 1991; selected in 1992; USPP13,081 issued 15 Oct. 2002; assigned to Beach Street Farms, LLC. **Fruit:** shiny; deep red color with yellow to brown achenes; blocky and somewhat ridged; larger than Selva early but variable through the season; firm; good flavor; slightly earlier production pattern than Selva; continues production through early October in coastal California; fresh market production. **Plant:** vigorous day-neutral; fairly large plant; produces many runners at high elevation nursery locations; high tolerance to two spotted spider mites (Tetranychus urticae) but susceptible to powdery mildew (Sphaerotheca macularis) and anthracnose (Colletotrichum acutatum). **Demetra.** A June bearing cultivar adapted to southern Italy environments. **Origin:** Metaponto (Matera B Basilicata region), Italy, from the public breeding activity of the Italian National Project Frutticultura, mainly financed by the Ministry of Agriculture, and coordinated by W. Faedi–Istituto Sperimentale per la Frutticoltura B Forlì Section. Tudla H Irvine; cross made in 1991; selected at Metaponto in 1993 by P. Arcuti (Az. Pantanello B Matera), W. Faedi (IFST-Forlì), S. Recupero (IFST-Caserta) and P.
Rosati (DiBiAGA-Univ. Polit. Marche, Italy); tested as MT 91.214.2; introduced in 2003.

**Fruit**: large and firm; elongated shape; shape not always regular in particular in the first part of picking or using cold stored frigo plants; very glossy red color; good and slightly aromatic flavor. **Plant**: short day type, producing fruit in very early season; intermediate vigor; small crown number and high yield; well adapted to winter planting technique in the South of Italy using fresh plants (plug or bare roots plant). Tolerant to soilborne pathogens and susceptible to Colletotrichum acutatum, Alternaria alternata, Xanthomonas fragariae and Sphaerotheca macularis.

**Driscoll El Capitan.** A short-day cultivar with fruit of dark red color, chordate shape and high flavor that is adapted to late-winter through spring production along the southern coast of California. **Origin**: A.Q. Amorao, A. Solis, Jr., and M. Ferguson, Driscoll Strawberry Associates, Inc., Watsonville, Calif. San Miguel x 12A71; selected in 1996 in Ventura County, Calif. USPP14,005 issued 22 July 2003; assigned to Driscoll Strawberry Associates, Inc.

**Fruit**: large; dark red; chordate shape; most similar to San Miguel, but with lighter flesh color; flavor is similar to but somewhat sweeter than San Miguel. **Plant**: more vigorous than San Miguel, but has a similar open plant habit of gobbose shape; slightly shorter inflorescence length than San Miguel. Production is greater than San Miguel with earlier initial fruiting. Moderately resistant to powdery mildew but susceptible to verticillium wilt and bacterial angular leafspot disease.

**Driscoll Venice.** A short-day cultivar with fruit of orange-red color, chordate shape and high flavor that is adapted to late-winter through spring production along the south coast of California. **Origin**: A.Q. Amorao, A. Solis, Jr., and M. Ferguson, Driscoll Strawberry Associates, Inc., Watsonville, Calif. Ana Maria x Balboa; selected in 1996 in Ventura County, Calif. USPP14,062 issued 12 Aug. 2003; assigned to Driscoll Strawberry Associates, Inc.

**Fruit**: large; chordate shape; most similar to Coronado but with somewhat lighter skin and flesh color; flavor is aromatic, much sweeter and less acidic than Coronado. **Plant**: gobbose shaped and similar to Coronado, but with denser foliage. Production is greater than Coronado and earlier. Moderately resistant to powdery mildew but susceptible to verticillium wilt and bacterial angular leafspot disease.

**Earlbittwo.** A short-day cultivar that can produce high early season yields of flavorful fruit in west central Florida and other areas with mild winter climates. **Origin**: University of Florida, Dover, Fla., by C.K. Chandler, D.E. Legard, C.A. Sims, and T.E. Crocker. Rosa Linda x FL 90-38; cross made in 1993; selected in 1994; tested as FL 93-100; released in 2000. USPP13,061 issued 12 May 2000. **Fruit**: large; primary fruit gobbose conic or asymmetrical and secondary fruit conic to wedge shaped; medium firm; external color a bright red; internal color a paler red. **Plant**: short-day; compact; susceptible to botrytis fruit rot.

**Flamenco.** A productive day-neutral cultivar with excellent fruit quality, adapted to northern Europe. **Origin**: D.W. Simpson; HRI East Malling, U.K. Evita x EMR77, complex pedigree includes Evita, Selva, Tioga, Gorella and Gento; cross made in 1994; selected in 1995; tested as EMR154; introduced in 2002. **Fruit**: very regular conical shape; glossy with orange-red color; firm with sweet flavor and juicy texture; excellent shelf life; medium-large size and low percentage waste; season from July to October but most productive from September onwards. **Plant**: day-neutral; more vigorous than Everest with semi-erect habit; good runner production; good yield, similar to Everest, provided tunnels are used for protection in autumn. Suitable for fresh market, PYO and catering trade. Resistant to Vorticillium dahliae, moderately resistant to Sphaerotheca macularis; susceptible to Colletotrichum acutatum.

**Galante.** See Cal Giant 3.

**Galecia.** See Cal Giant 5.

**GemStar.** A short-day cultivar that produces more consistently shaped fruit than Chandler on a vigorous, anthracnose crown rot tolerant plant in the southeastern US. **Origin**: P.C. Chang; Naples, Fla. B2 x A3; selected in 1997–98 season in Naples, Fla.; tested as JP2; USPP12,377 issued 29 Jan. 2002. **Fruit**: very large, larger than Chandler; light internal and external color than Chandler; good flavor; early ripening than Chandler; attractive; very glossy; small calyx; moderate firmness. **Plant**: short-day, very vigorous. Yield similar or greater than Chandler but more early season fruit than Chandler. Tolerant to anthracnose crown rot.

**Gloria.** See Galante.

**Harmonie.** A light red glossy attractive fruit, strawberry that keeps very well for several days, making it suitable for shipping. **Origin**: S. Khanizadeh, M. Deschênes, A. Levasseur, O. Carisse, J. DeEll, J.P. Privé and A. Sullivan. Agriculture and Agri-Foods Canada, St-Jean-sur-Richelieu and Association des producteurs de fraises et framboises du Québec. Yamaska x Joliette; tested as APF9323-3; introduced in 2003. **Fruit**: medium to large; conic to gobbose-conic; shiny; orange-red to red and it varies a bit from side to side; flesh is 80% to 100% orange-red to medium red and it is fairly firm; medium sweet; medium to medium-strong acidity; late ripening. **Plant**: hardy; medium vigor; average runner production; flat to flat gobbose habit; medium-dark green foliage; flowers are medium size, held on short to medium length peduncles of medium thickness that becomes arched as the fruits mature. Good for fresh markets and PYO, shipping. Moderately susceptible to leaf spot (Mycosphaerella fragariae), susceptible to leaf scorch (Diplocarpon earlianum).

**Irma.** A day-neutral cultivar adapted to the Po Valley environmental conditions (Verona area). **Origin**: in Verona (Veteno Region), Italy, from the breeding activity, mainly financed by the Verona Province and Strawberry Growers Association Aposcaligera, and coordinated by W. Faedi–Istituto Sperimentale per la Frutticoltura B Forlì Section. Donata x 89.33.1 (pedigree includes Marmolada, Addie, and Earliglow); cross made in 1995; selected in 1997 in Verona by W. Faedi, G. Baruzzi (ISF-Forlì), G. Baroni, L. Ballini (ISF B Verona), and F. Zenti (ISF Forli–Istituto Sperimentale per la Frutticolture B Forlì). **Fruit**: large and firm; elongated shape; shape more consistently shaped fruit than Chandler; good flavor; early ripening than Chandler; attractive; very glossy; small calyx; moderate firmness. **Plant**: day-neutral; more vigorous than Everest with semi-erect habit; good runner production; good yield, similar to Everest, provided tunnels are used for protection in autumn. Suitable for fresh market, PYO and catering trade. Resistant to Vorticillium dahliae, moderately resistant to Sphaerotheca macularis; susceptible to Colletotrichum acutatum.

**La Clé Des Champs.** A vigorous and productive midseason cultivar with large, firm and shiny berries, bred for eastern central Canada and northern climates. **Origin**: S. Khanizadeh, M. Deschênes, A. Levasseur, O. Carisse, J. DeEll, J.P. Privé and A. Sullivan. Agriculture and Agri-Foods Canada, St-Jean-sur-Richelieu, Quebec. SJ8924-6E x SJ8518-11; tested as LL9324-24; introduced in 2003. **Fruit**: primary fruit are large to very large; mainly conic shape but sometimes wedge; calyx segments are raised to very raised; secondary fruit are medium-large to large; conic; neck varies from slightly raised to very raised; calyx segments are reflexed to very reflexed; medium to hard to hull(cap) and the achenes are inserted slightly below to below the surface; glossy; medium red external color with a tendency to be bicolor (paler on one side than the other); flesh is medium red throughout and firm; flavor is pleasant with medium acidity and sugar; good shelf life; ripening 1 to 2 d after Kent. **Plant**: hardy; very vigorous; high runner production; upright to gobbose habit; medium green foliage; inflorescences are beneath to level with the foliage; flowers are large, held on long length peduncles of medium thickness that becomes arched as the fruits mature. Good for fresh markets and shipping. Susceptible to leaf scorch and leaf blight (Phomopsis obscurans).

**Madeira.** A short-day cultivar with fruit of dark red color and conic shape that is adapted to winter production in central Florida. **Origin**: K.L. Gilford and B.D. Mowrey, Driscoll Strawberry Associates, Inc., Watsonville, Calif. 7C171 x 21Y13; selected in 1997 in Hillsborough County, Fla. USPP14,109 issued 26 Aug.
2003; assigned to Driscoll Strawberry Associates, Inc. Fruit: large; mostly conic shape; most similar to Biscayne but darker red and more variable shaped; calyxes on secondary fruit are smaller than those on Biscayne; internal color is medium red, similar to Biscayne; slightly less acidic and less flavorful than Biscayne. **Plant:** slightly taller and narrower than Biscayne but overall of similar, flat globeose habit. Production volume is similar to Biscayne but earlier. Moderately resistant to verticillium wilt but susceptible to powdery mildew and bacterial angular leafspot disease.

**Marathon.** A short-day cultivar with fruit of orange-red color and chordate shape that is adapted to winter production in central Florida. **Origin:** K.L. Gilford, B.D. Mowrey, J. Campos-Garcia, T.M. Sjulin and L.T. Kodama, Driscoll Strawberry Associates, Inc., Watsonville, Calif. Key Largo x L3; selected in 1994 in Hillsborough County, Fla. USPP12,817 issued 30 July 2002; assigned to Driscoll Strawberry Associates, Inc. **Fruit:** large to very large; mostly chordate shape, similar to Biscayne, but larger, lighter red and more variably shaped; primary fruit in December are suitable for long-term marketing; internal color is light red, much lighter than Biscayne; similar in acidity but lower in sugars and less flavorful than Biscayne. **Plant:** similar, flat globeose habit to Biscayne. Production is earlier and of greater total volume than Biscayne. Susceptible to powdery mildew, verticillium wilt and bacterial angular leafspot disease.

**Ovation.** A very late-season, productive, large-fruited June-bearing strawberry adapted to the mid-Atlantic and neighboring regions. **Origin:** G.I. Galletta, J. Maas, J. Enns, S. Hokanson, and K. Lewers; USDA–ARS, Beltsville, Md. Lateglow x Hokanson, and K. Lewers; USDA–ARS, Beltsville, Md. Lateglow x Hokanson, and K. Lewers; USDA–ARS, Beltsville, Calif. Key Largo x L3; selected in 1994 in Hillsborough County, Fla. USPP12,817 issued 30 July 2002; assigned to Driscoll Strawberry Associates, Inc. **Fruit:** large to very large; mostly chordate shape, similar to Biscayne, but larger, lighter red and more variably shaped; primary fruit in December are suitable for long-term marketing; internal color is light red, much lighter than Biscayne; similar in acidity but lower in sugars and less flavorful than Biscayne. **Plant:** similar, flat globeose habit to Biscayne. Production is earlier and of greater total volume than Biscayne. Susceptible to powdery mildew, verticillium wilt and bacterial angular leafspot disease.

**Rubea.** A June bearing cultivar adapted to southern Italy environments. **Origin:** Marsala (Sicily region), Italy, from the public breeding activity of the Italian National Project Frutticolture, mainly financed by the Ministry of Agriculture, and coordinated by W. Faedi–Istituto Sperimentale per la Frutticolture B Forlì Section. Miss x USB 35 (breeding line from the USDA–ARS, Beltsville); cross made in 1994; selected in 1996 by W. Faedi, G. Baruzzi (ISF-Forlì) and P. Lucchi (CRPV B Cesena); tested as 94.568.2; introduced in 2003 (CPVO application nE 2003/1550). Fruit: very regular conical or conic-rounded shape; very bright red; very firm skin and flesh; good flavor (high sugar-acidic balance) and aroma. **Plant:** short day type producing fruit in early season with a similar cropping season to Miss; medium vigor; good resistance to Colletotrichum acutatum, Alternaria alternata, Sphaerotheca macularis; tolerant to soilborne pathogens; susceptible to leaf spot and *Xanthomonas fragariae*. **San Juan.** A short-day cultivar with fruit of large size, dark red color, high flavor and conic to chordate shape that is adapted to summer production along the central coast of California. **Origin:** B.D. Mowrey, L.T. Kodama, J.F. Coss, J.I. Espejo, Jr., and T.M. Sjulin, Driscoll Strawberry Associates, Inc., Watsonville, Calif. Lido x Mowred; tested as JP1; USPP12,283 is issued 18 Dec. 2001. Fruit: conic to long-conic shape; larger size, lighter color, and sweeter than Camarosa; similar shape and firmness to Camarosa; juicy; glossy; attractive; long pedicel. **Plant:** short-day; low chilling; open, prostrate plant habit; vigorous. Ripening season is later than Sweet Charlie but earlier than Camarosa. Yield of Ruby is less than Sweet Charlie but higher than Camarosa. Susceptible to powdery mildew; less susceptible to anthracnose than Selva.

**St-Jean d’Orléans.** An early midseason cultivar with resistance to leaf diseases and which has a long shelf life adapted for eastern central Canada and climates similar to Quebec conditions. **Origin:** S. Khanizadeh, M. Deschénes, A. Levasseur, O. Carisse, J. DeEll, D. Buszard, A. Gosselin and L. Gauthier, Agriculture and Agri-Food Canada, St-Jean-sur-Richelieu, Quebec, McGill University and Les Fraises de l’Ile d’Orléans Inc., Ile d’Orléans, Quebec. Tested as FI09624-11; introduced in 2003. Fruit: conic to globose-conic; glossy; red color at maturity; band without achenes is medium; calyx segments slightly reflexed; insertion is level with fruit; hard to hull; achenes are level with surface; firm is firm, medium red; medium sweetness and acidity; good shelf life; early midseason ripening. **Plant:** hardy; medium vigor; slightly above average runner production; flat habit; medium to slightly darker green foliage; flowers are medium size, held on short length peduncles of medium thickness that becomes arched as the fruits mature. Good for fresh markets. Fairly resistant to leaf spot and leaf scorch.

**Serenity.** A productive, late-season, short-day cultivar adapted to eastern Canada. **Origin:** University of Guelph-Simcoe (formerly the Hort. Res. Inst. of Ontario), Simcoe, Ontario, Canada by A. Dale. 137A84 x Chandler; cross made in 1991, selected in 1993; tested as 32R11; released in 2003; Canadian Plant Breeder’s Rights applied for. **Fruit:** late-season, about I d...
later than Bounty and Scottland in Simcoe; very large; bright; average red external and internal color; tender skin; excellent fresh flavor. **Plant:** short-day; runners well; yielded consistently in trials throughout Ontario; vigorous; winter hardy. Moderately resistant to leaf scorch and powdery mildew.

**Sonora.** A fully everbearing cultivar with fruit of medium to large size, dark red color and conic shape that is adapted to summer production along the central coast of California. **Origin:** B.D. Mowrey, L.T. Kodama, J.F. Coss, J.J. Espejo, Jr., and T.M. Sujin, Driscoll Strawberry Associates, Inc., Watsonville, Calif. 33X235 x 1.2; selected in 1996 in Monterey County, Calif. USPP13,386 issued 17 Dec. 2002; assigned to Driscoll Strawberry Associates, Inc. **Fruit:** medium to large; conic shape; most similar to Commander but of smaller average fruit size, greater length to width ratio, darker red external color and uniform red flesh color; flavor is similar to Commander, with somewhat greater acidity. **Plant:** similar in habit and size to Commander but with greater numbers of crowns per plant, and a denser, darker green canopy. Production volume is similar to Commander but with greater late-season yield. Moderately resistant to verticillium wilt but susceptible to powdery mildew and bacterial angular leafspot disease.

**Strawberry Festival.** A productive short-day cultivar adapted to west central Florida and other areas with mild winter climates. **Origin:** University of Florida, Dover, Fla., by C.K. Chiang, C.A. Sims, and T.E. Coss, Univ. of Florida, Dover, Fla., by C.K. Chiang, C.A. Sims, and T.E. Coss. **Fruit:** large; bright; average red external and internal color; tender skin; excellent fresh flavor. **Plant:** short-day; prolific runner producer; susceptible to anthracnose fruit rot; very susceptible to angular leafspot.

**Sveva.** A June bearing cultivar adapted to nonfumigated chalky soil in Italy. **Origin:** Ancona (Marche region), Italy, from the public breeding activity of the Italian National Project Frutticoltura, mainly financed by the Ministry of Agriculture, and coordinated by W. Faedi–Istituto Sperimentale per la Frutticoltura B Forlì Section. EM 483 x 87.734.3; cross made in 1993; selected at Ancona in 1996 by P. Rosati+. **Fruit:** medium large; long conic shape with a distinctive flat top or "shoulder", large amount of fruit is produced in summer and smaller and very uniform later in the season; large showy calyx. **Plant:** short-day; prolific runner producer; susceptible to anthracnose fruit rot; very susceptible to angular leafspot.

**Ventura.** A fully everbearing cultivar with fruit of large size, dark red color and conic shape that is adapted to autumn and early winter production along the south coast of California. **Origin:** A.Q. Amorao, A. Solis, Jr., and T.M. Sujin, Driscoll Strawberry Associates, Inc., Watsonville, Calif. Mr. Fx R1; selected in 1992 in Ventura County, Calif. USPP12,436 issued 5 Mar. 2002; assigned to Driscoll Strawberry Associates, Inc. **Fruit:** large; conic shape; moderate to large; bright red; excellent fresh flavor; lower percentage cull fruit than Camarosa. **Plant:** more open than plants of Camarosa. Moderately resistant to verticillium wilt and maturity delayed in fall production systems in California.

**Ventana.** A short-day (June bearing) cultivar similar to Camarosa but producing greater quantities of early-season fruit. **Origin:** developed by K.D. Larson and D.V. Shaw. Univ. of California, South Coast Research and Extension Center, Irvine. Cal. 93-170-606 x Cal. 92.35-601; cross made in 1996 selected in 1997; tested as Cal96.42-601 and later as Cal16. USPP13,469 issued 14 Jan. 2003; assigned to the Regents of the University of California. **Fruit:** symmetrical conic, very large (31.1 g); similar or greater firmness greater than Gaviota but less than Camarosa; bright red internal and external color but lighter than Camarosa; good fresh flavor; lower percentage cull fruit than Camarosa. **Plant:** large and vigorous, similar to Camarosa; more open than plants of Camarosa. Fruiting pattern similar to Camarosa although it produces more early season fruit than Camarosa. Moderately susceptible to common leaf spot and verticillium wilt; quite resistant to phytophthora crown rot and relatively resistant to powdery mildew. Some tolerance to two–spotted spidermites equal or greater than Camarosa.
black, mostly indistinguishable from Hass, ranging from 280 to 320 g in weight, with skin thicker than that of Hass and often breaking when peeled back from flesh although peel separation is clean; overall flesh quality is good. **Tree:** more upright than Hass but can be strongly influenced by pruning; tender as to cold susceptibility, floral type A. (Proc. World Avocado Congress III:114-118; 1998, Tel Aviv).

**Sir Prize.** A California cultivar similar to Hass in color and shape. **Origin:** open-pollinated seedling of a Hass seedling planted in April 1986 at Camarillo, Calif., and first tested in 1991. **Fruit:** pear-shaped with a distinctive ridge along one side, black and larger than ‘Hass’, averaging above 150 g on young trees; skin thinner than Hass, pliable and easily separated from the flesh; flesh color similar to Hass, with few fibers, seed small, averaging 10% to 12% of fruit weight; flesh quality excellent. **Tree:** upright but can be influenced by pruning; leaves without anise scent, but classified primarily as of Mexican race; floral type B. (Proc. World Avocado Congress III:114-118; 1998, Tel Aviv).

**TROPICAL FRUIT–KIWIFRUIT**

Jintao. A selection of Actinidia chinensis, a member of the family Actinidiaceae. **Origin:** Wuhan Institute of Botany, Hubei, China, from a wild vine collected in 1981 in Wuqing County, Jiangxi Province, southeastern China. **Fruit:** uniformly long and cylindrical, averaging 6.3 to 7.5 cm long by 3.7 to 4.2 cm diameter, weighing 65 to 120g, averaging 85g; skin almost hairless, light brown-colored; flesh greenish-yellow at harvest, tending to become yellow and orange-yellow during postharvest period, tender, juicy and sweet with a pleasant-tasting sugar-acid content, averaging 18% T.S.S., 7.8% total sugar, 2.1% acids and 150 mg vitamin C/100 g fresh fruit; about 350 seeds per fruit. **Vine:** moderately vigorous, productive, yielding 45,000 to 80,000 kg·ha⁻¹; heat tolerant. [HortScience 37(7):1135–1136; 2002].

**INDEX OF VARIETIES DESCRIBED**

*(synonyms in italics)*

14shelf life37-111 GRAPE
Adi AVOCADO (addendum)
Adria STRAWBERRY
AgriPearlOne PEACH
Adihayate PAWPAW
Alice RASPBERRY
Aliceblue BLUEBERRY (addendum)
Alsal STRAWBERRY
Apache APRICOT
Aphrodite PLUM
August Princess PEACH
Aurora BLUEBERRY
Autumn Yummy PLUM
Avalon Pride PEACH
Beckyblue BLUEBERRY (addendum)
Bish STRAWBERRY
Black Kat PLUM
Black Splendor PLUM
Brianna GRAPE
Brice RASPBERRY
Brigitta BLUEBERRY (addendum)
Briete blue BLUEBERRY (addendum)
Cal Giant 3 STRAWBERRY
Cal Giant 4 STRAWBERRY
Cal Giant 5 STRAWBERRY
Camino Real STRAWBERRY
Candy Pearl NECTARINE
Candy Red PEACH
Canterbury STRAWBERRY
Cascade Delight RASPBERRY
Cascade Nectar RASPBERRY
Chemniumus RASPBERRY
Cherryly PECAN
Clancy STRAWBERRY
Colima STRAWBERRY
Colombus BLUEBERRY
Craven BLUEBERRY
Crimson Glo PLUM
Crimson Heart PLUM
Danae PLUM
Dapple Fire PLUM
Deborah RASPBERRY
Delite BLUEBERRY (addendum)
Demetra STRAWBERRY
Diamond Pearl NECTARINE
Draper BLUEBERRY
Driscoll El Capitan STRAWBERRY
Driscoll Venice STRAWBERRY
Earlhbrite STRAWBERRY
Earlhoney NECTARINE
Early Danae PLUM
Early Dapple PLUM
Early Pearl NECTARINE
Edisto PECAN
Ervi GRAPE
Esquimalt RASPBERRY
F.P.C.D.O.V.#1 GRAPE
Fertodi aromarii RASPBERRY
Fertodi karmin RASPBERRY
Fertodi rubina RASPBERRY
Fertodi Venus RASPBERRY
Fertodi zenit RASPBERRY
Flameconco STRAWBERRY
Flavor Grenade PLUM
Flavor Jewel PLUM
Flavor Treat PLUM
Galante STRAWBERRY
Galexia STRAWBERRY
Gem Star STRAWBERRY
Georgitkan 28 GRAPE ROOTSTOCKS
Giant Pearl NECTARINE
Gil AVOCADO (addendum)
Gloria STRAWBERRY
Guilfrose PLUM (addendum)
Harmonie STRAWBERRY
Himbo-Top RASPBERRY
Ice Princess PEACH
Irma STRAWBERRY
Ivy Queen PEACH
Jayfree Plum PLUM
Jintao TROPICAL FRUIT–KIWIFRUIT
Jupiter GRAPE (addendum)
Kaituna RASPBERRY
Keilers PECAN
Kemmore Plum PLUM
Krymsk 1 PRUNUS ROOTSTOCK
Krymsk 86 PRUNUS ROOTSTOCK
L’Amour STRAWBERRY
La Clé Des Champs STRAWBERRY
Lamb/Hass TROPICAL FRUIT–AVOCADO
Lenoir BLUEBERRY
Leyfro PAWPAW
Liberty BLUEBERRY
L’Acadie GRAPE
Madeira STRAWBERRY
Malvasia Rosa GRAPE
Marathon STRAWBERRY
Marla RASPBERRY
Millennia BLUEBERRY (addendum)
Motueka RASPBERRY
Nico APRICOT
Ochlockonee BLUEBERRY
Octavia RASPBERRY
Orléans STRAWBERRY (addendum)
Ouachita BLACKBERRY
Ovation STRAWBERRY
Owen T PLUM
Ozarkblue BLUEBERRY (addendum)
Pamlico BLUEBERRY
Pecos BLACKBERRY
Pequot RASPBERRY
PF 24B PEACH
PF 35-007 PEACH
PF Lucky 13 PEACH
Pinnacle STRAWBERRY
Puru BLUEBERRY (addendum)
Queen Elisa STRAWBERRY
Rafca RASPBERRY
Rapphannock PAWPAW
Red Majesty PLUM
Reka BLUEBERRY (addendum)
Rosy Jewel PLUM
Royal Treat PEACH
Rueva STRAWBERRY
Rubirosa PLUM
Ruby STRAWBERRY
Saint-Laurent d’Orléans STRAWBERRY
Sampson BLUEBERRY
San Juan RASPBERRY
Sarah Anne GRAPE
Sebring BLUEBERRY
September Bright NECTARINE
Serbia GRAPE
Serenity STRAWBERRY
Shenandoah PAWPAW
Sierra Rose PLUM
Sierra Snow PEACH
Silverback PECAN
Sir Prize TROPICAL FRUIT–AVOCADO
Sleeping Beauty BLACKBERRY
Snow Princess PEACH
Sonora STRAWBERRY
Southern Belle BLUEBERRY
Southmoon BLUEBERRY (addendum)
Spring Treat PEACH
St-Jean d’Orléans STRAWBERRY
Star BLUEBERRY (addendum)
Stockbauer PECAN
Strawberry Festival STRAWBERRY
Sugar Princess PEACH
Sugrafanetee GRAPE
Sugrasentventeen GRAPE
Sugratwenty GRAPE
Sugratwentyone GRAPE
Sugratwentythree GRAPE
Sugratwentwo GRAPE
Sunlite Nugget PLUM
Suplumnwentfour PLUM
Suplumnwentthree PLUM
Suplumnwenttwo PLUM
Susquehanna PAWPAW
Sutter PLUM (addendum)
Svea STRAWBERRY
Sweet Crest PEACH
Sweet Pearl NECTARINE
ADDENDA AND REVISIONS TO PREVIOUS LISTS

AVOCADO


BLUEBERRY

Bluecrisp.—USPP11,033 issued. (List 39)
Briottia. Listing says “as of 1966 Briottia was the most important blueberry variety developed
in Australia.” The date should have been 1996. (3rd ed. of book)
Briteblue. The variety Callaway was misspelled. (3rd ed. of book)
Delite. T-14 became Bluebelle. Since it was already Bluebelle as of the date the book was
written, it should have been called Bluebelle, not T-14, in the Delite pedigree. (3rd ed. of book)
Millenia. USPP12,816 issued. (List 41)
Ozarkblue. USPP10,035 issued. (List 38)
Puru. USPP6,701 issued. (List 38)
Reka. The “tested as” section should read: “tested as E 118-7-17.” Also Reka has the
USPP6,700. (List 38)
Relf. USPP12,833 issued. (List 41)
Sutter. USPP12,398 issued. (List 41)
Tulare Giant. USPP12,224 issued. (List 41)
STRAWBERRY

Orléans. Originally released and described as L’Authentique Orléans. (List 41)
PALM AND BUTTERNUT

An on-line database of over 750 clones of Juglans species has been made available online at:
http://www.hortweb.auburn.edu/fnr/Juglans_005.htm by Keith Woeste, Harden Tree Improvement and Regeneration
Center, Purdue University.

PREVIOUS LISTS

List 35 and earlier lists are included in The Brooks and Olmo Register of Fruit & Nut Varieties,
3rd ed. (1997). ASHS Press. This book also contains a few previously undescribed varieties
which later appeared in Lists 36–41.

MASTER INDEX

A complete index of varieties is available at the American Pomological Society web site (http://hortweb.
cas.psu.edu/aps/).