Strawberry Cultivars for Western Oregon and Washington

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'Totem' (June-bearing) Photo: Bernadine Strik, © Oregon State University

The cultivated strawberry (*Fragaria* × *ananassa*), resulted from a cross between two wild strawberry species: *Fragaria virginiana* (meadow strawberry), which is native throughout much of North America, and *Fragaria chiloensis*, which is native to the Pacific coast of North and South America. Colonists in eastern North America sent the meadow strawberry, *F. virginiana*, back to Europe. A French spy, who was also a botanist, was monitoring the Spanish in Chile and brought plants of *F. chiloensis*, which had been improved greatly by native South Americans, back to Europe. By chance or design, the two species crossed, and the offspring became the cultivated strawberry we know today.

This publication briefly describes the main types of cultivated strawberries. Tables 1–3 list cultivars within each type that are adapted to conditions west of the Cascades

June-bearing strawberries

The primary type of strawberry is the June-bearing strawberry. These cultivars are sometimes referred to as shortday strawberries because they initiate flower buds the previous summer/fall as the days become shorter. This type of strawberry is commonly grown in perennial matted rows, where runners are encouraged to root within the row



each year to establish productive crowns for the following year.

Many California-developed June-bearing strawberry cultivars are available. However, many of these cultivars, including 'Camarosa', 'Chandler', 'Camino Real', 'Gaviota', 'Lassen', 'Tioga', 'Torrey', 'Tufts', and 'Ventana', are not good choices for the Pacific Northwest. The plants tend to be short-lived, not very productive, and have poor fruit quality. June-bearing cultivars are listed in Table 1.



'Puget Crimson' (June-bearing) Photo: Patrick P. Moore, Washington State University, used with permission

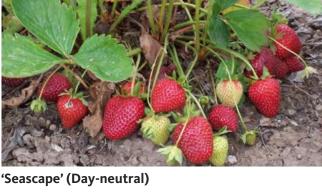


Photo: Bernadine Strik, © Oregon State University



'Puget Reliance' (June-bearing) Photo: Bernadine Strik, © Oregon State University



'Albion' (Day-neutral) Photo: Bernadine Strik, © Oregon State University

Everbearing strawberries

As people noticed that some types of strawberries bore small fall crops in addition to a spring crop, breeders and hobbyists began selecting for this trait. The result was everbearing strawberries, such as 'Ft. Laramie', 'Gem', 'Ogallala', 'Ozark Beauty', 'Quinault', and 'Rockhill'. Everbearing strawberries tend to have large spring and fall crops, with little fruit in between. An everbearing cultivar is listed in Table 2.

Day-neutral strawberries

In the 1970s, day-neutral (remontant) strawberries were developed at the University of California. Day-neutral strawberries flower throughout the growing season as long as temperatures are below 90°F. Periods of hot weather will cause a temporary gap in fruit production. Day-neutral strawberries do not produce as many runners as the other types, so they are usually grown commercially with plastic mulch in a hill system, where runners as removed to maintain individual plants. This type of strawberry can be grown in annual or perennial production systems. Cultivars are listed in Table 3.

Distinguishing between everbearing and day-neutral cultivars can be confusing for the home gardener. Day-neutral cultivars are "everbearing," whereas the old everbearing cultivars produce two distinct crops—one in the spring and one in the fall. Furthermore, both day-neutral and everbearing cultivars are usually sold as "everbearing" in retail nurseries.

Fragaria vesca (Alpine) strawberries

Fragaria vesca (fraises des bois or woods strawberry) is also commonly found throughout the Northern Hemisphere. Many "alpine strawberries" have been developed from this species. Cultivars include 'Alpine', 'Baron Solemacher', and 'Ruegen'. Plants are moderately vigorous but have poor durability because they are highly susceptible to viruses (these cultivars often are used as virus indicators). Berries are small, with a bright red external color and pale internal color. They are soft, very aromatic, and have a mild flavor. Berries are suitable only for fresh use. Yields are low, and commercial value is limited.

Cultivar table notes

Tables 1–3 list June-bearing, everbearing, and day-neutral strawberry cultivars that are adapted to conditions west of the Cascades. Most of these cultivars are not adapted to colder regions in the Pacific Northwest. In colder regions, choose cultivars that grow well in the Midwest or eastern United States, including 'Allstar', 'Jewel', 'Honeoye', 'Earliglow', 'Clancy', 'Lateglow', 'Annapolis', and 'Cavendish' (June-bearing) or 'Monterey', 'San Andreas', 'Tristar', and 'Tribute' (day-neutral).

Not all of the listed cultivars are available in nurseries.

Durability

Durability refers to how long-lived a cultivar might be in the field. Plant viruses and other diseases, particularly root rot, can shorten the productive life of a planting. Some cultivars, such as 'Hood', often bear for only one or two years, whereas others, such as 'Tillamook', often produce for several years.

Fruit descriptions and yield

Descriptions of yield, flavor and berry size are primarily based on results of trials by the USDAARS/OSU cooperative breeding program at the Oregon State University North Willamette Research and Extension Center in Aurora, Oregon, and the Washington State University breeding program in Puyallup, Washington. If a cultivar has not been tested at these sites, yield and berry descriptions are based on grower experience. Yield ratings are based on comparison to other cultivars of the same type.

Fruit traits, particularly flavor, can vary tremendously based on location (because of differences in temperature and rainfall), cultural practice and, of course, personal preference.

"Ease of capping" refers to how easily the fruit pick without the cap or calyx — an important trait for processing.

Commercial Production

A commercial value score is provided to help commercial growers select appropriate cultivars for fresh and processed markets:

- 1. Appropriate for most commercial operations
- 2. May have commercial value but:
 - 1. not enough is known about its performance or
 - 2. may meet a specific requirement (e.g., unique color or very early harvest) but has a negative trait (e.g., low yield or poor shipping quality)
- 3. Unlikely to have good commercial value

Small Farm, U-Pick and Home Gardens

Cultivars that are well-suited to small farms, local sales, U-pick farms and home gardens are noted as such.

What if you find a cultivar that's not on these lists?

Find out as much about it as you can:

- Is it June-bearing, everbearing, or day-neutral?
- Does the nursery's description indicate that it's susceptible to any diseases, such as root rot or viruses?
- What's the fruit like?

Remember: If you purchase a cultivar that is not on these lists, it probably hasn't been extensively tested in this region. It's best to try a few plants first and see how well they grow and how you like the fruit.

Table 1. June-bearing strawberry cultivars

These cultivars have a large spring (May-July) crop and are listed in approximate order of ripening.

Cultivar	Season	Plant	Fruit	Yield	Market	Large-scale commercial value	Small farm or home garden
Honeoye	Very early	Vigorous, poor durability, very susceptible to root rot	Medium to large size, bright red and glossy external color, pale red internal color, fair capping, firm, uniform conic shape, poor processed quality, good flavor	Low to medium	Fresh	2 (very early fresh- market niche)	yes

Cultivar	Season	Plant	Fruit	Yield	Market	Large-scale commercial value	Small farm or home garden
Sweet Sunrise (U.S. Plant Patent pending)	Early	Vigorous, durable	Medium to large size, bright red and glossy external color, deep red internal color, good capping, uniform shape, excellent flavor processed quality	High to very high	Fresh or processed	2 (too new to fully evaluate)	yes
Hood	Early	Vigorous, poor durability, sensitive to viruses	Medium to large size, bright red internal and external color, easy capping, medium firmness, uneven shape, good processed quality, excellent flavor	Medium	Fresh or processed	2 (despite name recognition and outstanding quality, lack of durability is a real concern for processed market, have contract in place before planting)	yes
Puget Reliance (U.S. Plant Patent 9, 310)	Early to midseason	Vigorous, very good durability	Large to very large size, bright red external color, pale red to red internal color, glossy, attractive, good firmness but tender skin, uniform shape, good processed quality, good flavor	High	Fresh or processed	1 (some resistance by buyers in processed markets so confirm with buyer; very attractive for local fresh sales)	yes

Cultivar	Season	Plant	Fruit	Yield	Market	Large-scale commercial value	Small farm or home garden
Valley Red	Early to midseason	Vigorous, very good durability, tolerant to root rot	Large, consistent size from first to last pick, deep red external color, medium red internal color, very uniform, attractive shape, good firmness but tender skin, good processed quality, good flavor	High	Processed	2 (too new to fully evaluate)	yes
Shuksan	Midseason	Vigorous, good durability	Medium to large size, bright red external color, pale red to red internal color, poor capping, tough skin, variable shape, fair processed quality, very good flavor	Medium	Fresh	2 (variable market satisfaction, from fair to excellent)	yes
Charm (U.S. Plant Patent pending)	Midseason	Very vigorous, excellent durability	Medium size, bright red internal and external color, excellent capping, tender skin, excellent processed quality, very good flavor	High to very high	Processed	2 (too new to fully evaluate)	yes
Sweet Bliss	Midseason	Vigorous, susceptible to Phytophthora crown rot	Medium to large size, bright red internal and external color, beautiful and glossy, symmetrical conic shape, tough skin, excellent flavor	Medium to high	Fresh (but processes well)	2 (too new to fully evaluate)	yes

Cultivar	Season	Plant	Fruit	Yield	Market	Large-scale commercial value	Small farm or home garden
Tillamook	Midseason	Moderate vigor, excellent durability	Large to very large size, bright red external color, red internal color, caps well, very firm, moderately tough skin, very good processed quality, good flavor but bland if. not fully ripe	High to very high	Fresh or processed	1	yes
Totem	Midseason	Vigorous, good durability	Medium to large size, bright red external and internal color, caps well, good firmness, tender skin, excellent processed quality, very good flavor	Medium to high	Processed	1	yes
Sequoia	Midseason	Moderate vigor	Can have large, dark red fruit with production extending over a longer season than most June - bearing cultivars	Medium	Fresh	3	yes (home garden only)
Benton	Midseason to late	Very vigorous, excellent durability	Medium size, bright red external color, pale internal color, caps well, medium to firm, tender skin, poor frozen color and texture, excellent flavor	Medium to high	Fresh	2 (local fresh)	yes

Cultivar	Season	Plant	Fruit	Yield	Market	Large-scale commercial value	Small farm or home garden
Rainier	Midseason to late	Vigorous, good durability	Medium to large size, bright red internal and external color, poor capping, fair firmness, excellent quality, excellent flavor	Medium	Fresh	2 (local fresh)	yes
Puget Crimson (U.S. Plant Patent 22,781)	Very late	Vigorous	First berries very large but size drops quickly, red external and internal color, fair capping, good firmness, uniform shape, excellent flavor	Medium to high	Fresh	1	yes

Table 2. Everbearing strawberry cultivar (two crops per year)

This cultivar has a large spring and fall crop

Cultivar	Plant	Fruit	Yield	Market	Large-scale commercial value	Small farm or home garden
Quinault	Moderate vigor, poor to fair durability	Medium size, bright red external and internal color, very soft, fair capping, fair flavor	Low to medium	Fresh	3	yes (but day- neutral cultivars perform better)

Table 3. Day-neutral strawberry cultivars (continuous cropping)

These cultivars have a large spring crop followed by a constant but small number of fruit until frost. Plants stop flowering for a while when temperatures exceed 90°F. Cultivars are listed in approximate order of ripening.

Cultivar	Plant	Fruit	Yield	Market	Large-scale commercial value	Small farm or home garden	Comment
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Albion (U.S. Plant Patent 16,228)	Fair vigor, poor durability	Large size, light red external color, pale internal color, firm, good flavor	Medium to high	Fresh	1 (in plasticulturre system)	yes	Most important day-neutral cultivar in northern California and the Pacific Northwest
Mara des Bois (U.S. Plant Patent 8,517)	Low vigor, poor durability	Small size, pale, soft, unique flavor that people either love or dislike	Low	Fresh	3		Commonly promoted in garden literature but has not done well in our trials
Monterey (U.S. Plant Patent 19,767)	Low vigor, poor durability	Large size, firm, light color, mild nontraditional flavor	Low to medium	Fresh	2		Common day- neutral cultivar in northern California
San Andreas (U.S. Plant 19,975)	Low vigor, poor durability	Large size, firm, light external and internal color, bland, susceptible to anthracnose	Low to medium	Fresh	2		Common day- neutral cultivar in northern California
Tristar	Vigorous, fair to good durability	Very small to medium size, glossy bright red external color, bright red internal color, good firmness, excellent flavor	Low	Fresh	3 (too small on average)	yes	Tribute and Tristar are often compared. Tristar has better flavor; Tribute has good flavor but better fruit size.
Tribute	Vigorous, fair to good durability	Medium size, attractive, glossy bright red external color, bright red internal color, poor capping, very good flavor	Low	Fresh	3	yes	See comment above for Tristar

SeascapeModerate(U.S. Plantdurability,Patentsusceptible to7,614)verticillium	Large, bright red external color, pale internal color, poor capping, firm, good flavor	Low to medium	Fresh	2 (best fruit quality combined with size among day-neutral cultivars in the Pacific Northwest)	yes	Yield low to medium unless managed intensively, but best fruit quality of the day- neutral cultivars
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For More Information

- <u>Growing Strawberries in Your Home Garden (https://catalog.extension.oregonstate.edu/ec1307)</u> (EC 1307). Oregon State University Extension.
- <u>Growing Day-Neutral Strawberries in Western Washington (http://pubs.cahnrs.wsu.edu/publications/wp-content/uploads/sites/2/publications/FS132E.pdf</u>) (FS132E). Washington State University Extension.

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'Sweet Bliss' (June-bearing)

Photo: Chaim Kempler, Berries and More Consulting, used with permission



'Charm' (June-bearing) Photo: Chad E. Finn, USDA-ARS, used with permission



'Sweet Sunrise' (June-bearing) Photo: Chad E. Finn, USDA-ARS, used with permission



'Rainier' (June-bearing) Photo: Tom Baumann, Expert Agriculture Team Ltd, Canada, used with permission



'Tillamook' (June-bearing) Photo: Bernadine Strik, © Oregon State University



'Shuksan' (June-bearing) Photo: Bernadine Strik, © Oregon State University

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