EC 1618-E **♦** March 2008

GROWING

SMALL FRUITS

STRAWBERRY CULTIVARS FOR OREGON

C.E. Finn and B.C. Strik

The cultivated strawberry, *Fragaria* x *ananassa*, resulted from a cross between two wild strawberries: *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 monitoring the Spanish in Chile, who was also a botanist, brought plants of *F. chiloensis*, which had been improved greatly by native South Americans, back to Europe. Whether by chance or design, the two species crossed, and the offspring became the cultivated strawberry we know today.

The primary type of strawberry is the **Junebearing** strawberry. These cultivars sometimes are referred to as short-day strawberries because they initiate flower buds the previous summer/fall as the days become shorter. Cultivars are listed in Tables 1 and 2 (pages 3–5).

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 (e.g., 'Ft. Laramie', 'Gem', 'Ogallala', 'Ozark Beauty', 'Quinault', and 'Rockhill'). Everbearing strawberries tend to have large spring and fall crops, with little fruit in between. Cultivars are listed in Table 3 (page 6).

In the 1960s, **day-neutral** strawberries were developed at the University of California. Day-neutral strawberries flower continuously as long as temperatures are below 90°F. Day-neutral strawberries do not produce as many runners as the other types, so they usually are grown commercially in a hill system, with annual rather than perennial production. Cultivars are listed in Table 4 (page 7).



Totem (June-bearing)

Distinguishing between everbearing and dayneutral cultivars can be confusing: day-neutral cultivars are "everbearing," while the old everbearing cultivars produce two distinct crops—one in the spring and one in the fall. Furthermore, both day-neutrals and everbearers usually are sold as "everbearing" types in retail nurseries.

Fragaria vesca ("fraises des bois" or "woods strawberry") is also commonly found throughout the northern hemisphere. It is the species from which many "alpine strawberries" have been developed. 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 and have a mild flavor, but often are very aromatic. Berries are suitable only for fresh use. Yields are low, and commercial value is limited.

For more information on growing strawberries, see *Growing Strawberries in Your Home Garden*, EC 1307.

Oregon State Extension UNIVERSITY Service

Chad E. Finn, berry crops geneticist, USDA-ARS, HCRL, Corvallis, Oregon; and Bernadine C. Strik, Extension berry crops professor, Oregon State University.

Cultivar notes

Cultivars are listed in this publication by type: June-bearing (Tables 1 and 2), everbearing (Table 3), and day-neutral (Table 4). We focus on cultivars adapted to conditions west of the Cascades. Most of these cultivars are not adapted to colder regions in Oregon. In colder regions, choose cultivars that grow well in the Midwest or eastern U.S., including 'Allstar', 'Jewel', 'Honeoye', 'Earliglow', 'Clancy', 'Lateglow' (June-bearers); and 'Fern', 'Selva', 'Hecker', 'Tristar', and 'Tribute' (day-neutral). See *Growing Strawberries in Your Home Garden*, EC 1307, for more information on growing strawberries in colder regions.

Note that not all of the listed cultivars are available in nurseries.

Harvest season

Within each type, cultivars are listed in approximate order of ripening.

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 life of a planting. Some cultivars, such as 'Hood', often bear for only 1 or 2 years, while others, such as 'Benton', often produce for several years.

Fruit descriptions and yield

Most of these cultivars have been tested at the OSU North Willamette Research and Extension Center (Aurora, Oregon). Descriptions of yield, flavor, and berry size are based on these tests. If a cultivar has not been tested at this site, yield and berry size are based on grower experience. Yield ratings are based on comparison to other cultivars of the same type. Keep in mind that fruit traits, particularly flavor, can vary tremendously based on location (especially 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:

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

Home gardens

Cultivars that are well suited to home garden production are noted as such.

Puget Reliance (June-bearing)



Table 1. June-bearing strawberry cultivars

Cultivars are listed in approximate order of ripening.

Cultivar	Season	Plant	Fruit	Yield	Market	Commercial value	Home garden
Honeoye	Very early	Vigorous, poor durability	Medium to large, 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)	•
Hood	Early	Vigorous, poor durability	Medium to large, bright red internal and external color, easy to cap, 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 the processed mar- ket, have contract in place before planting)	•
Sumas	Early	Vigorous, good durability	Medium to large, bright red internal and external color, fair capping, good firmness, fair processed quality, good flavor	Medium to high	Fresh	2	
Pinnacle	Early to midseason	Moderate vigor, fair durability	Large to very large, bright red external color, pale red to red internal color, caps well, excellent firmness, primary (king) fruit can have unusual shape, fair pro- cessed quality, fair flavor	High to very high	Fresh or processed	2 (too new to fully evaluate)	
Puget Reliance	Early to midseason	Vigorous, very good durability	Large to very large, 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 resis- tance by buyers in processed markets so con- firm with buyer; very attractive for local fresh sales)	•

Table 1. June-bearing strawberry cultivars (continued)

Cultivars are listed in approximate order of ripening.

Cultivar	Season	Plant	Fruit	Yield	Market	Commercial value	Home garden
Shuksan	Midseason	Vigorous, good durability	Medium to large, bright red external color, pale red to red internal color, poor cap- ping, tough skin, variable fruit shape, fair processed quality, very good flavor	Medium	Fresh	2 (variable market satisfaction from fair to excellent)	•
Tillamook	Midseason	Moderate vigor, good durability	Large to very large, bright red external color, red internal color, caps well, very irm, moderately tough skin, good flavor, very good processed quality		Fresh or processed	1 (not as intensely flavored as standards, but high yields and good quality)	•
Totem	Midseason	Vigorous, good durability	Medium to large, bright red external and internal color, caps well, good firmness, tender skin, excellent processed quality, very good flavor	Medium to high	Processed	1	•
Benton	Midseason to late	Very vigor- ous, excellent durability	Medium size, bright red external color, paler internal color, caps well, medium to firm, tender skin, poor frozen color and texture, excellent flavor	Medium to high	Fresh	2 (local fresh)	•
Rainier	Midseason to late	Vigorous, good durability	Medium to large, bright red internal and external color, poor capping, fair firmness, excellent quality, excellent flavor	Medium	Fresh	2 (local fresh)	•
Redcrest	Late	Vigorous, fair durability	Medium to large, bright red external and internal color, attractive fruit, caps well, firm, uniform shape, outstanding pro- cessed quality, excellent acidic flavor	Medium to high	Processed	2 (outstanding processed prod- uct but variable performance from site to site; too tart for many local fresh markets)	

Table 1. June-bearing strawberry cultivars (continued)

Cultivars are listed in approximate order of ripening.

Cultivar	Season	Plant	Fruit	Yield	Market	Commercial value	Home garden
Puget Summer	Very late	Vigorous, fair durability	First berries are medium to large but berry size drops quickly, red external color, paler internal color, caps well, medium firmness, uniform shape, excellent processed qual- ity, excellent flavor	Medium	Fresh or processed	1 (has found market niche for fresh and processed)	•
Independence	Very late	Vigorous, good durability, some variegated leaves	First berries very large, later berries medium, does not cap, firm, good skin toughness, variable fruit shape, good flavor	Medium to high	Fresh	2 (late-season fresh niche)	•
Firecracker	Very late	Vigorous, good durability	Medium size, bright red external and internal color, caps well, good firmness, tender skin, excellent processed product, excellent flavor	Medium to high	Fresh or processed	1 (late-season fresh market)	•

Table 2. California-developed June-bearing strawberry cultivars

Unless you are a commercial grower using an annual plasticulture system, the following cultivars are not good choices for Oregon. The plants tend to be short lived, not very productive, and have poor fruit quality. Although many cultivars resulted from the UC Davis breeding program, including 'Camino Real', 'Gaviota', 'Lassen', 'Tioga', 'Torrey', 'Tufts', and 'Ventana', only two are described here.

Cultivar	Comments
Camarosa	The current standard for the southern California industry. Very little flavor, but large, firm fruit. Can be high yielding in some plasticulture systems.
Chandler	The former standard for the southern California industry and the basis for much of the annual plasticulture strawberry industry in the eastern U.S. Can have large, good-flavored, highly colored fruit if allowed to ripen fully. A commercial grower trying this production system would do well to start with Chandler.

Table 3. Everbearing strawberry cultivars

These cultivars have a large spring and fall crop.

Cultivar	Plant	Fruit	Yield	Market	Commercial value	Home garden
Fort Laramie	Low vigor, poor to fair durability	Small to medium first fruit with small fruit later, medium red external color, light internal color, poor capping, medium firmness, berries may be hollow inside, good sweet flavor	Low to medium	Fresh	3	• (but day neutrals perform better)
Ozark Beauty	Vigorous, poor to fair durability	Medium size, bright red external and internal color, very soft, fair capping, fair flavor	Low to medium	Fresh	3	● (but day neutrals perform better)
Quinault	Moderate vigor, poor to fair durability	Medium, bright red external and internal color, very soft, fair capping, fair flavor	Low to medium	Fresh	3	● (but day neutrals perform better)

Table 4. Day-neutral strawberry cultivars

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.

Cultivar	Plant	Fruit	Yield	Market	Commercial value	Home garden	Comment
Albion	Fair vigor, poor durability	Large, light red external color, pale internal color, firm, good flavor	Medium to high	Fresh	1 (in plasti- culture system)	•	The most important day- neutral cultivar in north- ern California
Diamante	Low vigor, poor durability	Large, pale external and internal color, firm, very bland	Low	Fresh	3		Previously the most important day-neutral cul- tivar 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)	•	'Tribute' and 'Tristar' often are compared; 'Tristar' has the better flavor, while '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	•	'Tribute' and 'Tristar' often are compared; 'Tristar' has the better flavor, while 'Tribute' has good flavor but better fruit size
Selva	Moderate vigor, poor to fair durability	Large, light red and glossy exter- nal color, pale internal color, very good firmness, very good uniform shape, mild flavor	Medium to high	Fresh	2		Probably the most com- mon day-neutral cultivar grown in Oregon to date, but this may change
Seascape	Moderate vigor, good durability	Large, bright red external color, pale internal color, poor capping, firm, good flavor	Low to medium	Fresh	2 (best fruit quality combined with size for Oregon in day-neutral types)	•	Yield can be low to medium unless managed intensively, but has the best fruit quality of the day neutrals

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

Find out some of the plant growth and fruit characteristics:

- Is it a June-bearing, everbearing, or day-neutral type?
- 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's not on these lists, it probably hasn't been extensively tested in Oregon. It's best to try a few plants first; see if they grow well and if you like the fruit.

For more information

Growing Strawberries in Your Home Garden, EC 1307 (revised 2008)

Web: extension.oregonstate.edu/catalog/ Fax: 541-737-0817 E-mail: puborders@oregonstate.edu Phone: 541-737-2513



Tillamook (June-bearing)

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Trade-name cultivars are listed as illustrations only. The OSU Extension Service does not endorse any listed cultivar or intend any discrimination against others not listed.

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