



BLUEBERRY CULTIVARS FOR OREGON

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There are five main types of blueberries grown in the United States: *northern highbush*, *southern highbush*, *rabbiteye*, *lowbush*, and *half-high*.

Northern highbush blueberries (*Vaccinium corymbosum*) are native to much of the eastern and northeastern U.S., from the Appalachian Mountains to the Atlantic Ocean. Plants grow 5 to 9 feet tall. One named selection from the wild, ‘Rubel’, was introduced in the early 1920s. Many commercial northern highbush cultivars have been developed through traditional breeding programs. This is the most common type of blueberry grown worldwide and in Oregon. Cultivars are listed in Table 1 (pages 4–9).

Southern highbush blueberries were developed to allow blueberry production in “low-chill” areas (regions with mild winters). A dormant plant requires a certain amount of chilling (between approximately 32°F and 45°F) to break bud and flower normally. Southern highbush blueberries have a much lower chilling requirement (200 to 300 hours) than do northern highbush blueberries (more than 800 hours). Southern highbush blueberries are complex hybrids of a native, evergreen, Florida species (*V. darrowii*) and *V. corymbosum*. The plants grow about 6 to 8 feet tall.

This type of blueberry will grow in Oregon but does not produce a very high yield. Bushes bloom in late winter, and flowers are frequently damaged by frost. However, some southern highbush cultivars, such as ‘Legacy’ and ‘Ozarkblue’, have a larger portion of *V. corymbosum* and thus a higher chilling requirement. These cultivars can be grown successfully in the Pacific Northwest. Cultivars are listed in Table 1 (pages 4–9).

Rabbiteye blueberries (*V. virgatum*, syn. *V. ashei*) are native to the southeastern U.S., where plants grow from 6 to 10 feet tall. Rabbiteye cultivars were developed in regions with long, hot summers, and they behave differently in the Pacific Northwest than in



Elliott (northern highbush)

their “home” environments. Here the plants tend to be smaller, and they ripen fruit very late in summer and fall. In some cool summer environments such as the Pacific Coast, there often is not enough heat to fully ripen the fruit.

Rabbiteyes are more sensitive to winter cold than are northern highbush types. Although we have not seen much cold damage on rabbiteyes grown in the Willamette Valley, this type of blueberry is not recommended for production east of the Cascades.

In general, rabbiteye cultivars tend to be dark fruited, with more noticeable seeds, thicker skins, and noticeable grit or stone cells (somewhat like pears), compared to highbush blueberries. However, some newer cultivars have fruit quality much more like that of highbush types. Cultivars are listed in Table 1 (pages 4–9).

Lowbush blueberries (*V. angustifolium*) are native from Minnesota to Virginia and to the northeastern U.S. and the maritime provinces of Canada. Lowbush blueberries are low-growing shrubs that spread by underground stems. They seldom grow higher than 1.5 feet. While a few cultivars, such as ‘Blomidon’, ‘Burgundy’, and ‘Brunswick’, have been named, the lowbush blueberry industry depends on managing wild stands made up of hundreds or thousands of clones per acre. Cut plants back to the ground every 2 to 3 years if they get too shrubby.

Half-high blueberries are the result of crosses between the northern highbush and lowbush blueberry. The idea was to develop a blueberry for cold climates; these cultivars will tolerate -35 to -45°F. Plants grow from 3 to 4 feet tall, so most of the fruiting area is below the snow line. These cultivars are suitable for commercial production where other types of blueberry

Cultivars for colder growing regions, limited space, or container production

Although most commercial blueberry production in the Pacific Northwest is west of the Cascades, northern highbush blueberries are successfully grown in some areas of Idaho and eastern Oregon and Washington. In these regions, growers must contend with shorter growing seasons and colder winter temperatures than



Duke (northern highbush)

Pollination

Although highbush blueberry cultivars generally are self-fertile, cross-pollination by another cultivar produces larger berries. Choose a pollenizer within the same type of blueberry to ensure good berry size and yield. All northern highbush blueberries are compatible with each other for cross pollination. Rabbiteye blueberries are not self-fertile and need a pollenizer (a different rabbiteye cultivar) for fruit production.

are not hardy. They also are used as attractive landscape plants and are suited to container production. In the landscape, they do not need to be pruned as severely or as regularly as highbush types. Cultivars are listed in Table 2 (page 10).

their western counterparts, and selection of cold-hardy cultivars is especially important.

Although harvest dates vary tremendously among cultivars, most cultivars bloom within about a week of one another. Thus, selecting a mid- to late-season cultivar does not necessarily ensure a late bloom date and reduced susceptibility to spring frosts.

Of the early-season cultivars, ‘Duke’ and ‘Spartan’ tend to bloom later than average. Late-season cultivars ‘Elliott’, ‘Jersey’, and ‘Ozarkblue’ tend to bloom later than early and midseason cultivars.

Short growing seasons also create problems on high-elevation sites, where cultivars that ripen after ‘Berkeley’ (such as ‘Jersey’, ‘Darrow’, ‘Ozarkblue’, and particularly ‘Elliott’) may not ripen reliably before fall frosts.

For east-central and southeastern Idaho, as well as particularly cold sites in the Oregon counties of Grant and Umatilla, only the most cold-hardy cultivars should be considered. In these areas, snow cover is important in preventing freezing injury, and winter injury is likely during cold winters with little or no snow.

The half-high cultivars listed in Table 2 (page 10) are recommended for particularly cold production regions. They also work well in home gardens as ornamentals and in containers.

Cultivar notes

Harvest season

In Oregon, the blueberry fruiting season extends from late June through September, depending on the type and cultivar (see figure, page 11). The fruit on each cultivar ripens over a 2- to 5-week period. Cultivars are listed in approximate order of ripening.

Type

The most common type grown in Oregon is the northern highbush blueberry. Unless labeled “southern highbush” or “rabbiteye,” the cultivars in Table 1 are all northern highbush blueberries. Table 2 lists half-high cultivars.

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

Berry descriptions and yield

Most of these cultivars have been tested at the Oregon State University North Willamette Research and Extension Center (Aurora, Oregon). Descriptions of yield 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 commercial grower experience.

When a berry is picked from the fruit stem (pedicel), a scar is left on the base of the berry. A cultivar that has a small or “dry” scar will ship and store better than one that has a large or “wet” scar.

Cultivars with tight clusters are not suited to machine harvest.

Commercial value

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. See *Growing Blueberries in Your Home Garden*, EC 1304 (revised 2008).



Liberty (northern highbush)

Table 1. Northern highbush, southern highbush, and rabbiteye blueberry cultivars

Cultivars are listed in approximate order of ripening. Unless otherwise noted, all cultivars are northern highbush types.

Cultivar	Bush	Berry	Yield	Commercial value	Home garden
Bluetta	Moderate vigor, compact, consistently productive, more frost- and winter-hardy than 'Earliblue'	Medium size, light blue, firm, poor scar, good flavor, loose clusters, not suited to shipping	Low to medium	3	
Duke	Vigorous, erect, stocky, open	Large, uniform size, light blue, firm, small scar, flavor is mild but eating quality ("pop" in your mouth) is excellent, flavor declines less in storage than other cultivars, excellent shipping quality, machine harvests well	Medium to high	1	●
Earliblue	Vigorous, erect	Medium to large, light blue, firm, resistant to cracking, medium scar, good flavor, sweet, aromatic, medium-loose clusters, ships well, fruit ripens early, doesn't drop quickly once ripe	Medium	1	●
Bluegold	Vigorous, but somewhat squat	Large, light blue, firm, small scar, very good flavor, overall excellent quality, often retains stems when picked	Medium to high, varies from field to field and year to year	2 (challenging bush habit, variable performance)	
Spartan	Vigorous, erect, open, generally does not do as well on heavy soils	Very large, light blue, firm, very good scar, excellent flavor, blooms late (avoids frost injury) but ripens early, concentrated ripening permits two main pickings	High to very high	1	●
Patriot	Vigorous, moderately erect, open, short (less than 4 feet), sensitive to bacterial blight (<i>Pseudomonas</i>), tolerant of heavier, wetter soils, cold weather, and frost	Very large, slightly flat, medium blue, not firm, small scar, acidic flavor, concentrated ripening permits two main pickings, berries have a "red back" when immature, can have tight fruit clusters	High	3	●

Table 1. Northern highbush, southern highbush, and rabbiteye blueberry cultivars *(continued)*

Cultivars are listed in approximate order of ripening. Unless otherwise noted, all cultivars are northern highbush types.

Cultivar	Bush	Berry	Yield	Commercial value	Home garden
Draper	Vigorous, upright	Large to very large, very uniform size, light blue, firm, small scar, crisp texture, very good flavor, stores extremely well, concentrated ripening	Expected to be high	1	●
Reka	Very vigorous, upright, open	Medium-large to large, dark blue, firm, medium scar, good flavor, machine harvestable, excellent for processing	Very high, can overcrop	1 (excellent processed, but not an ideal fresh-market berry due to dark color)	
Bluejay	Extremely vigorous, fast growing, medium spreading, open	Medium to large, light blue, firm, resists cracking, excellent scar, mild flavor, loose clusters, ripe fruit can hang on plant for a long time without losing quality, so can be harvested in fewer pickings, machine harvests well, berries ship well, keeping quality is good	High	1	
Toro	Stocky, spreading, moderate vigor, takes 1 year longer than more vigorous cultivars to come into full production, seems relatively susceptible to root rot, does not perform well in heavier soil	Very large, light blue, firm, small scar, good flavor, excellent overall quality, concentrated ripening, tight clusters make machine harvesting difficult	High to very high	2 (hard to harvest mechanically)	●
Collins	Medium vigor, slightly spreading, productive, tolerant of spring frosts	Large, light blue, firm, resists cracking, small scar, excellent flavor, fruit does not drop quickly once ripe, suitable for fresh market, suitable for machine harvest		3 (no longer widely grown or available)	

Table 1. Northern highbush, southern highbush, and rabbiteye blueberry cultivars *(continued)*

Cultivars are listed in approximate order of ripening. Unless otherwise noted, all cultivars are northern highbush types.

Cultivar	Bush	Berry	Yield	Commercial value	Home garden
Olympia	Vigorous, spreading	Medium size, dark blue, soft, thin skin, resistant to cracking, medium-large scar, excellent flavor, fruit hang well, popular for local fresh market due to flavor and aroma, good-quality processed pack	Low to medium	2 (primarily hand picked for local sales)	●
Berkeley	Vigorous, open, spreading, easy to grow, but does best in light, well-drained soil	Very large, light blue, soft, resistant to cracking, fair scar, fair or mild flavor, fruit stores well, susceptible to fruit rot	Medium to very high	3 (disease susceptibility)	
Bluecrop	Vigorous, upright, open, easy to grow, but tends to overproduce if not pruned correctly	Medium to large, light blue, firm, resistant to cracking, small scar, good flavor, loose fruit cluster, fruit can be tart or show “red back” (only half of fruit blue) if picked too early, over-cropped, or when ripening in very hot weather, harvests well by machine if first picking is hand harvested	High, consistent production	1	●
Rubel	Moderately vigorous, good cold hardiness	Very small, medium blue, firm, small scar, good flavor, machine harvests well	Medium	2 (suited strictly for machine harvest, small-berry processed market)	
Jersey	Very vigorous, large, upright	Small, medium blue, firm, resistant to cracking, medium scar, sweet, mild flavor	Medium	2 (suited strictly for machine harvest, processed market)	● (good for baking)
Blueray	Vigorous, upright, open	Large to very large, medium blue, firm, resistant to cracking, medium scar, excellent flavor, aromatic, tight clusters, fair shipping quality	High	3	●

Table 1. Northern highbush, southern highbush, and rabbiteye blueberry cultivars *(continued)*

Cultivars are listed in approximate order of ripening. Unless otherwise noted, all cultivars are northern highbush types.

Cultivar	Bush	Berry	Yield	Commercial value	Home garden
Ivanhoe	Very vigorous, erect, not consistently productive	Large, light blue, firm, resistant to cracking, medium scar, good flavor, tart, aromatic, medium-loose fruit cluster, not suited for machine harvest		3 (no longer widely grown or available)	
Nelson	Moderate vigor, upright, open	Large to very large, light blue, firm, medium scar, mild flavor	Medium	2 (good quality but disease-susceptible)	
1613-A (called “Hardy-blue” by growers and some nurseries)	Vigorous, erect, open, adapted to a wide range of soil types	Small, dark blue, soft, medium scar, excellent flavor, very sweet, fruit hang and can be harvested in two passes with a machine	Medium	2 (well suited for machine harvest, processed-fruit market)	●
Legacy (southern highbush)	Very vigorous, upright, habit can be weepy (umbrella-shaped), somewhat ever-green foliage, unlike many southern highbush cultivars, does not break bud midwinter	Medium-large, light blue, very firm, very small scar, very good flavor, very high overall quality	High to very high	1	●
Liberty	Very vigorous, upright, but benefits from trellis	Medium to large, bright blue, slightly flat, excellent firmness, small scar, good flavor, picks easily	Expected to be high	1	●
Brigitta Blue (commonly called Brigitta)	Very vigorous, upright, open	Large, light blue, firm, small scar, good flavor, slightly tart, excellent shipping/storage characteristics	Low to very high, varies from field to field and year to year	2 (variable performance)	

Table 1. Northern highbush, southern highbush, and rabbiteye blueberry cultivars *(continued)*

Cultivars are listed in approximate order of ripening. Unless otherwise noted, all cultivars are northern highbush types.

Cultivar	Bush	Berry	Yield	Commercial value	Home garden
Darrow	Vigorous, erect, sensitive to bacterial blight (<i>Pseudomonas</i>)	Large to very large, light blue, medium firm, resistant to cracking, medium-large scar, excellent flavor, slightly tart, clusters can be tight, not suited to machine harvest	High	2 (large fruited, fresh market only)	●
Chandler	Moderate vigor, slightly spreading, sturdy, sensitive to bacterial blight (<i>Pseudomonas</i>) when lush fall growth occurs	Very large, medium to dark blue, good firmness, good scar, good flavor, very long ripening season, size can vary when heavily cropped	High to very high	1 (long ripening season can be an advantage or disadvantage, depending on harvest method and market)	●
Ozarkblue (southern highbush)	Low to moderate vigor, upright, open, unlike many southern highbush cultivars, does not break bud midwinter, precocious—high yields soon after planting, may need special pruning to keep from overcropping	Medium to large, medium blue, good firmness, small scar, good but mild flavor	High, some concern with erratic yields from plant to plant	1	
Elliott	Moderate vigor, erect, very precocious and needs hard pruning when young	Medium size, light blue, firm, small scar, fair but tart flavor, clusters can be tight, for a long time, the only cultivar choice for the late season	High to very high, needs heavy pruning	1	
Aurora	Moderate vigor, stocky, spreading growth habit, especially when young	Medium size, dark blue, firm, small scar, mild, somewhat acidic flavor	High	1 (still preliminary but seems to be very good)	

Table 1. Northern highbush, southern highbush, and rabbiteye blueberry cultivars *(continued)*

Cultivars are listed in approximate order of ripening. Unless otherwise noted, all cultivars are northern highbush types.

Cultivar	Bush	Berry	Yield	Commercial value	Home garden
Maru (rabbiteye)	Vigorous, somewhat spreading	Large, medium blue, firm, excellent scar, mild flavor, gritty texture from large “stone” cells, prone to splitting from rain, because fruit ripens extremely late, not all fruit may ripen on mature bushes	Unknown, expected to be high	3 (too many fruit defects)	
Rahi (rabbiteye)	Vigorous, spreading	Large, light blue, firm, small scar, very good flavor, excellent fresh quality	Medium	2 (not enough known yet)	●
Ochlock-onee (rabbiteye)	Vigorous, upright, narrow crown	Medium to large, light blue, firm, good scar, mild flavor, may be resistant to splitting from rain	Medium to high	2 (too new to evaluate fully, but late season makes it worthy of trial)	
Tifblue (rabbiteye)	Vigorous, erect, dense foliage, suckers	Small, very light blue, firm, small scar, good fresh quality, mild flavor, subject to splitting from rain, long harvest season	Very high	2 (fruit quality is only fair, but often used as pollenizer for other rabbiteye cultivars)	
Powder-blue (rabbiteye)	Vigorous, erect, dense foliage, suckers	Small, very light blue, very firm, small scar, good flavor, very good overall fresh quality, resistant to splitting from rain	Very high	1	●

Table 2. Half-high blueberry cultivars

Cultivars are listed in approximate order of ripening.

Cultivar	Harvest	Bush	Berry	Yield	Home garden
Polaris	Early	Compact, upright, spreading, to 4 feet tall	Small to medium, light blue, firm, good flavor	Medium	●
Northland	Early midseason	Vigorous, spreading, to 4 feet tall, many shoots	Medium size, dark blue, sweet	Very high (up to 18 lb/bush)	●
Northcountry	Early midseason	Compact, to 3.5 feet tall and wide, adapted to a wide range of acidic soil types	Medium size (less than 0.5 inch diameter), sweet, very good flavor	Low to medium	●
Northsky	Early midseason	Compact, to 3 feet tall and wide	Small, very light blue, sweet, very good flavor	Low	●
Chippewa	Midseason	Compact, vigorous, upright, to 4 feet tall	Medium size, very light blue, medium firm, very sweet	Medium	●
Northblue	Midseason	Upright, open, to 3 feet tall	Medium to large, good flavor	Medium	●

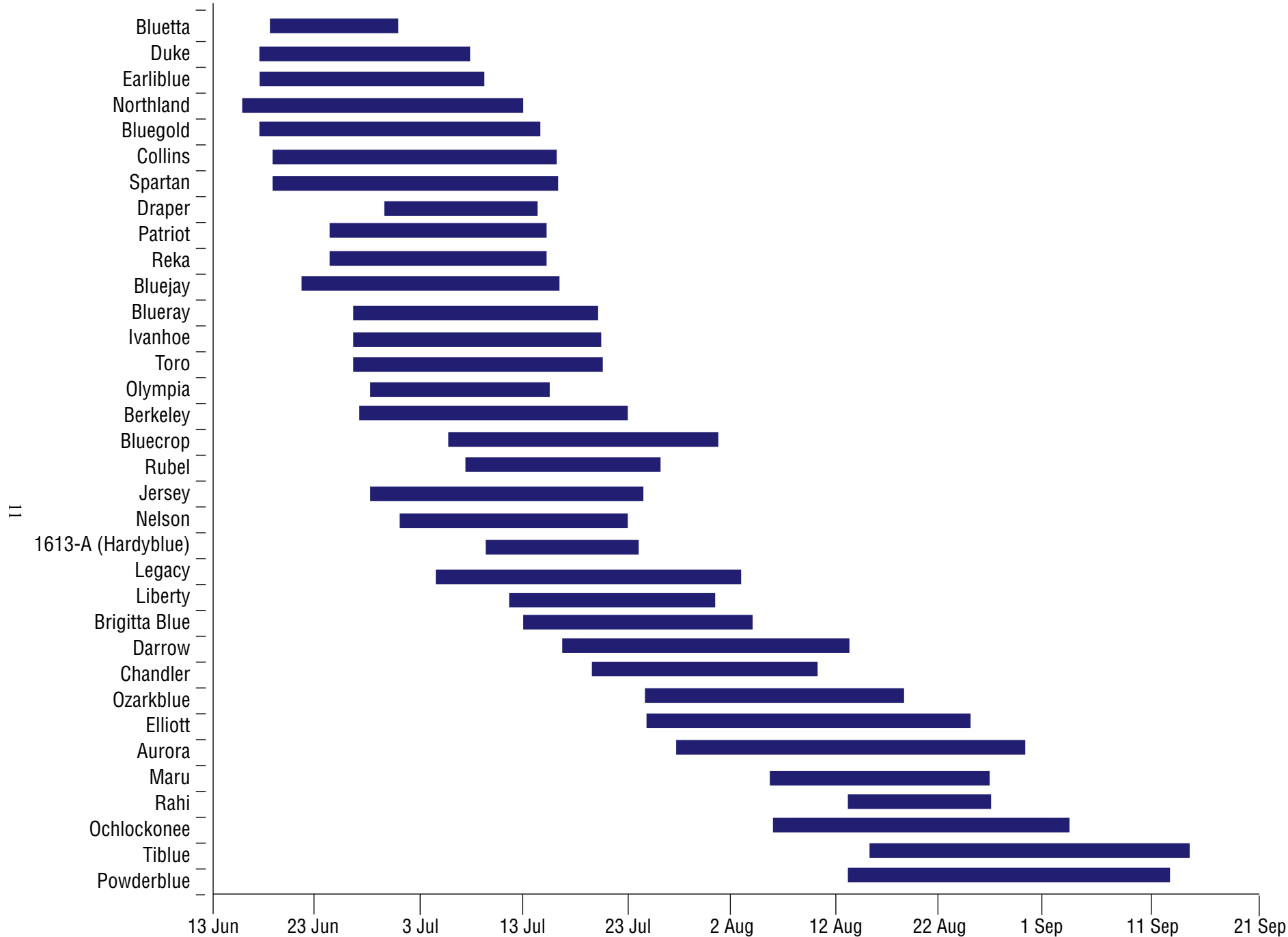


Figure 1. Approximate fruiting season of highbush and rabbiteye blueberry cultivars (at the OSU North Willamette Research and Extension Center, Aurora, OR). Bars represent harvest season for 5 to 95 percent of total yield. Cultivars are sorted by the date at which 50 percent of total yield has been harvested. Ripening time can vary with year (weather) and cultural practices.

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

Find out as much about it as you can, such as its growth habit, hardiness, fruit characteristics, disease susceptibility, and machine harvestability (commercial growers).

Remember that if you purchase a cultivar that is not on these lists, it probably has not been extensively tested in Oregon.

It's best to try some plants first and see how well the cultivar grows and how you like the fruit.



Powderblue (rabbiteye)

For more information

Growing Blueberries in Your Home Garden, EC 1304 (revised 2008)

Web: extension.oregonstate.edu/catalog/

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E-mail: puborders@oregonstate.edu

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