

GROWING BLUEBERRIES

ON THE NORTH COAST

There are three species of blueberries grown in the United States, the most important of which is Vaccinium corymbosum (high-bush blueberry). The plants are vigorous, upright, and grow best in moist, well-drained acid soils. The plants reach a size of approximately 4' wide by 6-8' tall. The fruits are large and have a very intense flavor when grown in cool climates.

Rabbit-eye blueberries (Vaccinium ashie) are very vigorous, productive high bush varieties that are not Winter-hardy but are drought-tolerant. Rabbit-eyes are primarily grown in the southeastern portion of the United States.

Low-bush blueberries (Vaccinium angustifolium) spread by underground stems and seldom grow more than 18" tall. This species is native to the northeastern U.S. and Canada and is grown in the northeast as a very cold-hardy fruit.

In California, very limited acreages of high-bush blueberries are grown, mostly on the coast in cool climates where soils are moist and have a low pH. Low bush blueberries perform poorly in California, where they receive inadequate chilling. The rabbit-eye varieties have not been tested in California.

Blueberry varieties (listed in order of ripening)

Ripening begins in Sonoma County approximately the third week of May.

Early Blue

Vigorous, erect, productive bush. Fruit is medium size, loose clustered. The fruit is light blue, firm, resistant to cracking, has a good flavor and is sweet. Plants are resistant to powdery mildew. Ripening begins the last week of May.

Bluetta

Moderately vigorous, compact, somewhat spreading, productive bush. Medium size fruit, firm, with a fair flavor.

Duke

Vigorous, erect, open, productive bush. Flavor is fair. Fruit is medium sized, light blue, and firm.

Spartan

Vigorous, erect, open, productive bush. Berry is very large, light blue, firm, with an excellent flavor.

Patriot

Vigorous, moderately erect, open, very productive bush. Very large, slightly flat, medium blue, excellent flavored berry. Plants are tolerant of heavier, wetter soils.

Collins

Medium, slightly spreading, productive bush. Large, light blue, firm, excellent flavored berry.

Blue Jay

Vigorous, fast-growing, erect, open, moderately productive bush with a medium large, light blue, very firm, mild-flavored berry.

Blue Ray

Vigorous, erect, open, productive bush. Berry is very large, light blue, firm, with an excellent flavor.

Ivanhoe

Very vigorous, erect, inconsistent producer with a large, light-blue, firm, tart-flavored berry.

Olympia

Vigorous, spreading, productive bush with a medium sized, good-flavored berry.

Blue Crop

Vigorous, erect, open, very productive bush with a very large, light blue, firm, good-flavored berry. One of the main commercial varieties grown. Tends to overproduce.

Rancocas

Vigorous, dense, small bush. Fruit is small with intense flavor.

Berkeley

Vigorous, open, spreading, very productive bush with very large, light blue, firm berries with a mild flavor and mild acidity.

Pemberton

Vigorous, erect, very productive bush with a medium sized, dark blue, firm, fair-flavored berry.

Herbert

Vigorous, open, spreading, consistently productive bush with a very large, medium blue, medium firmness, very good-flavored berry.

Coville

Vigorous, open, spreading, productive bush with a very large, medium blue, firm, good tart-flavored berry.

Jersey

Very vigorous, erect, productive bush with a medium sized, firm, fair-flavored berry.

Dixie

Vigorous, open, spreading, productive bush with very large, medium blue, firm, excellent-flavored berries.

Darrow

Vigorous, erect, consistently productive bush with medium sized, light blue, firm, excellent-flavored berries.

Late Blue

Vigorous, erect, consistently productive bush with large, firm, good-flavored berries.

Elliott

Vigorous, erect, consistently productive bush with a medium sized, mild-flavored, tart berry.

PERCENTAGE OF FRUIT GATHERED EACH WEEK DURING THE RIPENING SEASON FOR COMMON Highbush CULTIVARS

Cultivar	First week	Second week	Third week	Fourth week	Fifth week	Sixth week	Seventh week	Eighth week	Ninth week
*Earliblue	30 ^a	40	30						
Weymouth	30	40	30						
Bluetta	40	50	5	5					
*Collins		30	40	30					
*Meader		30	40	30					
Blueray		30	30	20	10	10			
*Rancocas		30	30	20	10	10			
*Bluecrop			20	40	30	10			
Bluehaven			20	40	30	10			
*1613-A			50	50					
*Berkeley				40	30	30	10		
*Rubel				20	40	30	10		
*Jersey				20	40	30	10		
*Dixie					50	40	10		
*Herbert					50	40	10		
Burlington					20	40	30	10	
*Darrow					30	40	30		
*Coville						30	30	30	10
*Lateblue							35	35	30
*Elliott								70	30

* Suitable for mechanical harvest.

^a Percentages may vary depending on condition of bush and type of wood left in pruning.

Soil

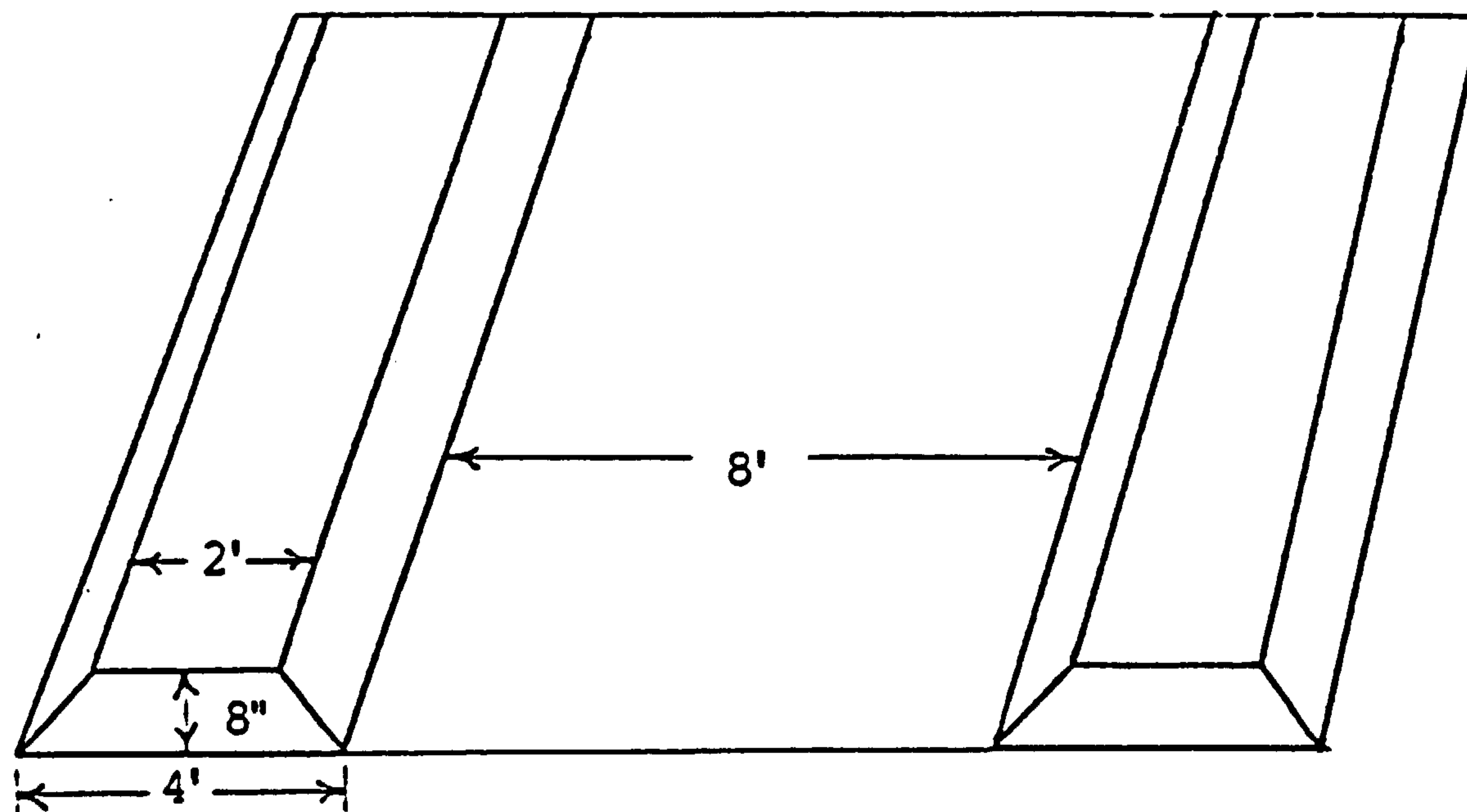
Blueberries require a sunny location and do best in cool climates with sandy soils that are well-drained yet kept moist throughout the growing season. The pH should be in the range of 4.5 to 5.5. Peat and muck soils are suitable, but contrary to popular belief, blueberries do not do well in wet soils.

Often soil conditions are modified in blueberry plantings to improve drainage through the addition of organic matter and to adjust the pH to the bush's exact liking. If your soil pH is below 4, incorporate finely-ground dolomitic limestone, following recommended rates. More likely, if the pH is above 5.5, acidify the soil by adding one of the following amendments:

1. 4-6" of peat moss incorporated in the top 6-8";
2. Elemental sulphur at a rate of approximately 1-2 pounds per 100 sq. ft. to lower the pH one unit (e.g., from 6 to 5);
3. Aluminum sulphate at a rate of 6-12 pounds per 100 sq. ft. to lower the pH one unit (e.g., from 6 to 5).

Any of these materials should be worked in a year before planting. It is highly recommended to plant blueberries on raised beds, 8-12" high and 2-4' wide to provide additional drainage.

APPROXIMATE DIMENSIONS OF BLUEBERRY RAISED BEDS



Planting

Plant healthy, two- to four-year-old plants from Fall through Winter, into early Spring. Purchase bare root or container-grown plants from a reputable nursery. Plants should be spaced approximately 4' x 8'. Set plants no more than one inch deeper than they were growing in the nursery or container. Firm the soil around the plants. Water thoroughly after planting, but don't fertilize at this point.

Strip off all flower buds or blossoms that appear the year the plants are set so that no crop is produced. If possible, set up blueberry rows to run north and south to take better advantage of the light interception.

After planting, apply a surface mulch of old sawdust or some other suitable organic material. This helps keep the soil cool, conserves moisture, adds organic matter, and controls weeds. Blueberry bushes are free-standing and require no trellis.

Fertilizing

Four weeks after planting, apply 10-10-10 fertilizer at the rate of about one ounce (1-1/2 tbsp.) per plant. Sprinkle it evenly within 12-18" of each plant, but not directly on the crown or stems. If possible, use mixes in which the potassium is supplied in the form of potassium sulfate rather than potassium chloride. Also, one of the best nitrogen sources is ammonium sulfate, which also helps to acidify the soil. Avoid nitrate forms of nitrogen.

Irrigation

Blueberries have a shallow, fibrous root system, so they are very susceptible to drought injury. A uniform and adequate water supply is essential for optimum growth. Plants require approximately one inch of water per week from May through September. The greatest demand for moisture occurs from berry swell through early harvest and when fruit buds are being formed, usually mid-July through August. Generally, two irrigations per week are adequate to maintain the proper moisture. Avoid overwatering blueberry plants, however, because the roots are very susceptible to root rot.

Pruning

At planting time, prune all branches back by about 30% to encourage vigorous new growth. Young plants require little pruning for the first 2-3 years. Remove only dead or dying parts of branches and less vigorous, spindly growth around the base of the plants to encourage vigorous, upright growth. After the third year, blueberries need to be pruned annually. Fruit is produced on one-year wood. If you prune too little, plants become twiggy with small, spindly growth that leaves little strong wood for the future and produces small fruit. Excessive pruning produces fewer, larger berries and more new wood, but a poor crop. Pruning is best achieved in the dormant season when there are no leaves so that you can

small, spindly growth that leaves little strong wood for the future and produces small fruit. Excessive pruning produces fewer, larger berries and more new wood, but a poor crop. Pruning is best achieved in the dormant season when there are no leaves so that you can see what you're doing.

First of all, cut out any wood that is dead, damaged or diseased. Keep the bush open by removing basal shoots that tend to crowd the inside of the plant or shoots that are smaller than pencil-size in diameter. Leave larger shoots to develop into next year's fruiting wood. Essentially, cut out older wood (four or five years old) with small, weak lateral branches and few fruit buds. Cut these canes back to the ground or to a strong new side shoot. Limit the number of canes to one for each year of age of the plant, or a maximum of 6-8 canes for old bushes.

If you remove one or two canes each year, and if one or two new canes are produced, none will be over 4-6 years old. Remove excess small sucker shoots growing from the base of the plant and weak, twiggy wood, especially from the top of the plant to allow light to reach the center. If plants over-bear, remove some of the weakest one-year-old wood and, if necessary, tip back some of the remaining one-year-old wood. Then cut off about 1/3 of the flower buds, which can be distinguished by their fatter and less pointed appearance compared to vegetative buds.

Pests (weeds, insects and diseases)

Weeds

Since a mulch is an essential ingredient in good blueberry production, weeds are rarely a problem. Maintain a constant mulch around the base of the plants by adding at least 1" per year to a total depth of approximately 3-4".

Insects

Fortunately, blueberries have very few problems with insect pests. Aphids can be present and occasionally leave a sticky film on the berries. Orange tortrix occasionally feeds on leaves but does very little damage. Sometimes root weevils, like the black vine weevil, can feed on roots and stunt plants. Thrips occasionally feed on the developing fruit at the blossom stage and scar the fruit.

Diseases

Botrytis twig and blossom blight - This gray mold fungus can be a problem in prolonged rainy Springs. Generally, fungicides are applied at the beginning of petal fall and repeated at 10-day intervals during wet weather.

Phytophthora root rot - This root rot causes problems in poorly-drained or over-irrigated plantings.

Bird Control

Many species of birds feed on blueberries. The principal species are starlings, robins and bluebirds. The most effective method of control is to exclude them with bird netting.

SOURCE: Paul Vossen

UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

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