

Blueberries

A. The Plant

1. The blueberry plant is a perennial, consisting of a shallow root system and woody canes that originate from the crown of the plant.

2. The root system is very fibrous but devoid of root hairs. Root hairs function in most plants by increasing the surface area of the root for water and nutrient uptake. The absence of root hairs makes the blueberry plant very sensitive to changing soil water conditions.

3. The blueberry plant requires an acid soil pH (4.5-5.0) and does best on soils that are amended with organic matter.

B. Types of Blueberries

1. *Lowbush* - Of commercial importance in Maine and Canada.
2. *Rabbiteye* - Grown commercially in the southern U.S.
3. *Highbush* - The type that can be grown in Kansas.

C. Site Selection and Preparation

1. It is best if the site is selected the year before planting. The sod turned under, soil pH checked (should be between 4.5-5.0) and if soil pH is not in the right range sulfur should be applied to lower the pH and lime to raise the pH. (See table for amount of sulfur required to lower soil pH for blueberries.) If sulfur is needed to lower the soil pH, the bed should be worked up and irrigated 3 times the year before planting.

Table 18. Amount of sulfur required to lower soil pH for blueberries.

Present pH of soil	Desired pH value for blueberries					
	4.5			5.0		
	Sand	Loam	Clay	Sand	Loam	Clay
	(lb/100 sq ft) ^a					
4.5	0.0	0.0	0.0			
5.0	0.4	1.2	1.4	0.0	0.0	0.0
5.5	0.8	2.4	2.6	0.4	1.2	1.4
6.0	1.2	3.5	3.7	0.8	2.4	2.6
6.5	1.5	4.6	4.8	1.2	3.5	3.7
7.0	1.9	5.8	6.0	1.5	4.8	4.8
7.5	2.3	6.9	7.1	1.9	5.8	6.0

^aTo convert to lb/A, multiply by 435.

2. Blueberries require full sun and well-drained soil. They like strawberries. are particularly sensitive to too much or too little water in the root zone.

3. Soil should be tested for mineral requirements the summer or fall before planting and for pH the fall and spring before planting.

4. Blueberries grow and produce best on moist, porous, acidic soils that have an adequate level of chemically and physically reactive organic matter. When blueberries are grown on mineral soils (soils containing a low amount of organic matter) they do best on sandy loam soils that are amended with organic matter and an organic mulch. **Soil texture is not easily changed but you can change the texture of the soil in an area where a few blueberry plants will be grown.**

D. Cultivar Selection

1. Early season - 'Sunrise', Mid-season - '**Bluecrop**', Late Mid-season - 'Jersey', Late season - 'Lateblue', and Very late season - 'Elliott'

E. Planting and Establishment

1. Because most blueberry cultivars are not well adapted to mineral soils, most soils will require considerable amendment with organic matter if plants are to thrive.

2. Buy 2-year-old blueberry plants and space the plants 5 feet apart in the row and 8 feet between rows. A 4 foot sod strip can be left between rows.

3. Rotted sawdust or peat moss should be worked into the planting hole, replacing about one-half of the original soil with the organic material.

4. After lightly broadcasting a complete fertilizer around the plants and watering in, plants should be heavily mulched along the length of the row, including the crown of the plant, with about 4-6 inches of rotted sawdust or another source of organic matter. (Avoid using green sawdust, since it may burn the tender green stems and will compete with the plant for nitrogen.)

5. Immediately after planting, prune back 50 percent of the wood and remove flowers as they become visible, so the plants establish well.

F. Irrigation, Fertilization and Weed Control

1. Blueberries require 1 inch of water per week from rainfall or irrigation during the spring and fall and 1.5 to 2 inches per week during the summer months.

2. Lightly broadcast a complete fertilizer around the planting area in late April and in mid-July apply only ammonium sulfate in a similar fashion. Be sure to follow each fertilization with irrigation.

3. Keep the area surrounding the plants weed free so the plants are not competing for water and nutrients.

4. Every fall check the soil pH and mulch the plants with 4-6 inches.

G. Pruning

1. Pruning controls crop load, thus increasing fruit quality. It also invigorates the plant, forcing essential new growth from the base of the plant.
2. The philosophy behind blueberry pruning is to constantly renew the older, decreasingly productive canes by cutting them out and forcing new canes, while the majority of canes are in a productive, intermediate stage.
3. Pruning is best accomplished toward the end of the dormant season, usually sometime in March.
4. The first 5 to 6 years, remove small spindly branches and canes that lie on the ground. Also remove some of the centermost canes when the bush becomes crowded. The remaining canes should be thinned by removing weak lateral branches and dense bushy twigs.
5. Once the plant is mature (6 years old), it should be producing 3 to 5 new shoots per year.
6. After 5 years, begin removing the oldest canes while keeping the three best new canes. This will result in a plant that has 2 to 3 canes each of new, 1-, 2-, 3-, and 4-year-old canes, or 10 to 15 canes per bush.

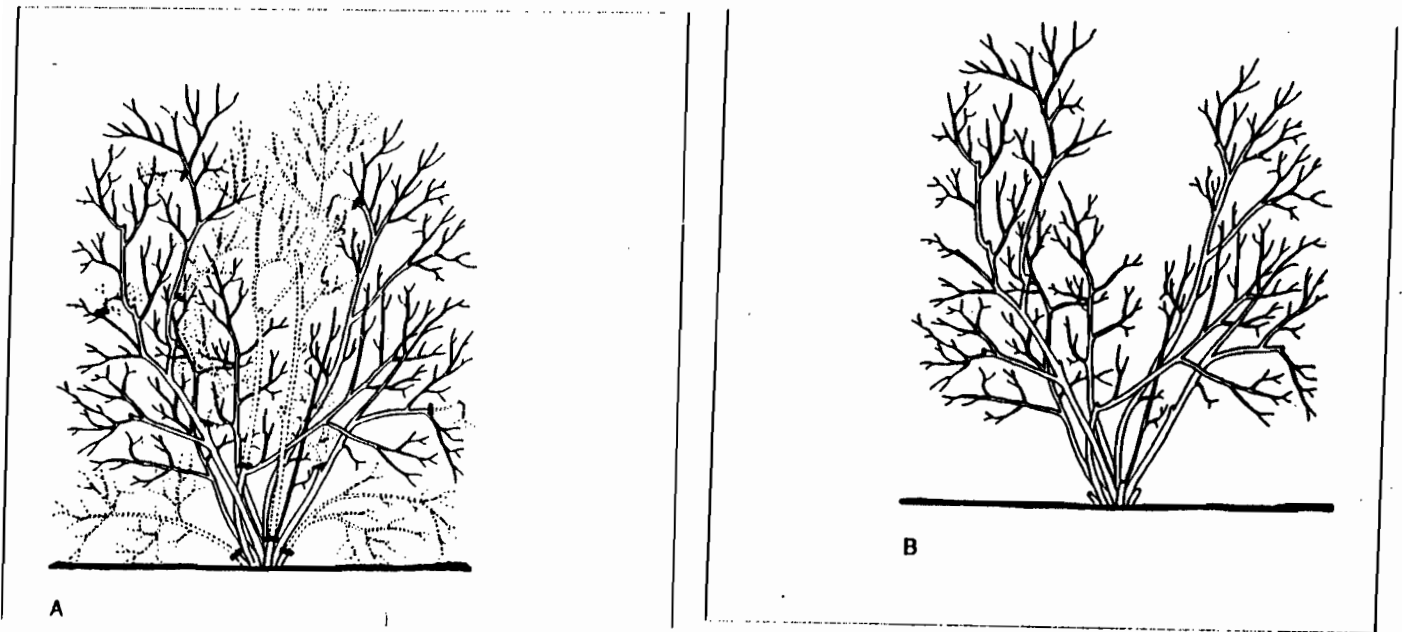


Figure 12. Blueberry pruning.
A = mature bush showing typical annual pruning cuts (solid bars) and wood to be removed. B = mature bush after pruning.

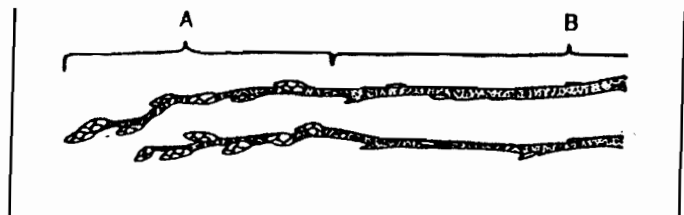


Figure 11. One-year-old blueberry stem sections showing fruit buds (A) and leaf buds (B).

Updated Comments on Blueberry varieties

High-bush

Bluecrop - Vigorous, erect, open, very productive shrub with loose clusters. Large, light blue, flavorful, aromatic, firm, resistant to cracking fruit with small scar.

Duke - Vigorous, erect, open, consistently productive. Medium, flavorful, light blue, firm fruit with small scar. More aromatic after storage.

Bluejay - Vigorous, fast-growing, erect, open, moderately productive shrub with loose clusters. Berries are medium-large, light blue, firm, tart, pleasant-flavored and resist cracking with small scar.

Blueray - Vigorous, erect, open, productive shrub with small, tight clusters. Berries are large, light blue, firm, resistant to cracking with small-medium scar. Excellent flavor and aroma. Performs well in hot climates.

Jersey - Vigorous, erect, productive shrub with loose clusters. Medium, firm, medium blue, resistant to cracking, medium scar berries. Fair flavor with no aroma.

Patriot - Very vigorous, moderately upright. Above average yield. Fruit firm if weather not too hot. Small dry recessed scar

Material adapted from material originally prepared by Alan Erb.