



Blueberry: Pruning Techniques

Annual pruning of mature blueberry plants is necessary if you want to keep them productive. Blueberry bushes produce flower buds the year prior to flowering. This means flowers that bloom this spring were set last summer on new wood. Therefore, if the plant is not pruned and fertilized to promote new, vigorous growth, much of the plant's energy will be used in maintaining tall, woody, nonproductive growth. The time to do the pruning is late winter to early spring.

A rule of thumb is to not have any stem on the plant more than five or six years old. One way to determine the age of a stem is to look at the bark color. New stems are green to reddish. Two-year-old stems are reddish to light brown. Three-year-old stems are light brown to gray while older stems are gray and the bark may be starting to flake off. The number of stems in a mature plant is usually kept between four to seven.

To prune highbush blueberries correctly, it is essential to know their bearing habits. Most of the flower buds, each containing from five to ten flowers, are borne on the top portions of the current season's growth (Figure 1). The buds are formed in the axils of leaves during the late summer and early fall then bloom and produce fruit the following year.



Figure 1. Notice the difference between the large flower buds and small leaf buds.

Pruning should begin the first year and continue each year in early spring. The severity of the pruning can influence ripening. Light pruning may prolong the ripening season, heavy pruning may concentrate it and very heavy pruning may substantially decrease the yield. Individual fruit size is increased by pruning. First year plants should have all weak and spindly growth pruned out and flower buds removed to prevent fruiting. This can be done by tipping back the shoots bearing flower buds or removing individual flower buds. First year fruiting will delay the vegetative growth necessary for large-sized healthy plants.

After one growing season, the more vigorous bushes may be allowed to bear a small crop by keeping 20 to 30 flower buds per bush. Any weak or unthrifty wood is removed throughout the season. If enough buds have not been removed, the remaining bearing shoots are thinned out or headed back. On small, less vigorous plants, weak growth and all flower buds should be removed (Figures 2a, b).

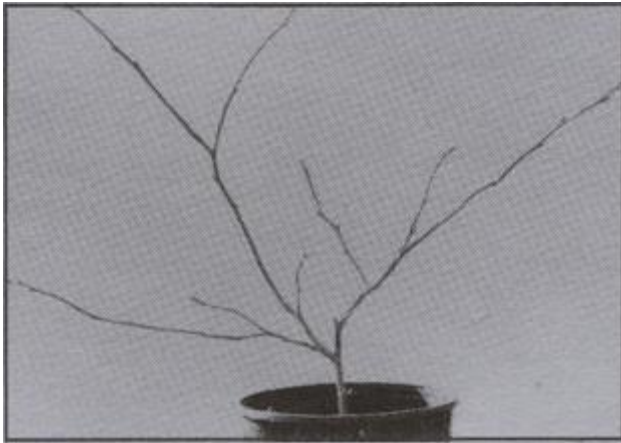


Figure 2a. 'Earlyblue' blueberry bush after one growing season

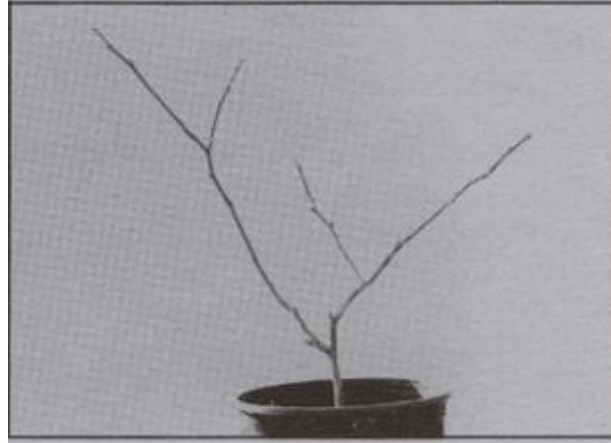


Figure 2. The same bush after pruning

After two seasons, most bushes may be allowed to bear a small crop (one to two pints per bush). The emphasis should still be on establishing a healthy, vigorous bush and not on fruit production. Again, all unthrifty growth should be removed (Figures 3a, b). If this procedure is followed, good growth of the bush is assured.

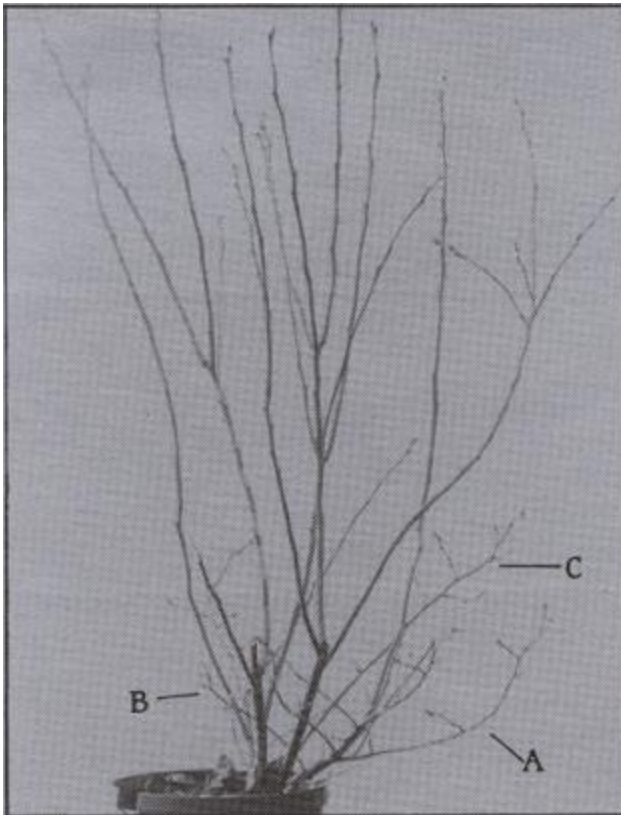


Figure 3a. Vigorous 'Coville' blueberry bush after two years, before pruning.
 A. Fruiting branches too close to ground
 B. Spindly, brushy twigs too near the ground.
 C. Spindly, unproductive twigs.

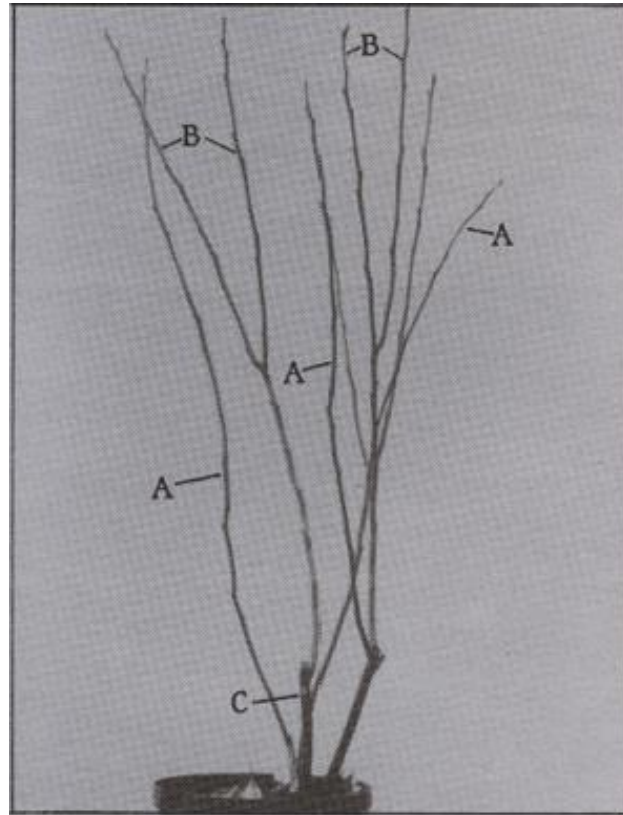


Figure 3b. The same bush after pruning.
 A. One year, vigorous wood.
 B. Productive wood.
 C. Original cane at time of planting.

Heavy fruit production now may result in less vigorous plants. Similar pruning procedure should be followed every year allowing the plant to produce successively larger yields until the bush is mature. Healthy, vigorous two-year-old plants may reach maturity after four to six growing seasons.

There are three points to consider in pruning a mature bush: (1) prune lightly enough to ensure a heavy crop for the current year, (2) prune severely enough to secure large-sized berries, and (3) prune enough to balance crop and bush vigor and thus assure sufficient new wood for future bearing while containing overall bush size.

After removing all diseased, dead or injured wood, old, unthrifty canes should be cut to a two or three inch stub, or to a low, vigorous side shoot. A cane's production usually decreases after about five years, therefore, all canes five or more years old should be removed. These canes are often gray in color and the bark will be peeling or flaking off. Removing the oldest one-fifth of the canes each year will maintain plant vigor and production. Absence of new basal growth frequently indicates that the bush is overcrowded with old canes and/or under-fertilized. These bushes should be pruned severely enough to promote the growth of three to five new shoots from the base of the plant each year. After the first two steps are completed, the bush should be thinned by removing twiggy or bushy growth clusters and weak, lateral shoots (Figures 4a, b). Erect-growing cultivars should be thinned out more in the center, while spreading cultivars usually require more pruning of the lower, drooping branches.

Since some cultivars will tend to overbear, some thinning of flower buds may be beneficial. This may be accomplished by tipping some of the bearing shoots, which serves to thin the crop and improve berry size. Failure to thin the flower buds may result in a large number of fruit that fail to ripen or that ripen very late. Lightly pruned, heavy bearing bushes will produce smaller berries. In pruning, less vigorous, thin (flat-sided) growth is always removed and thicker, more vigorous wood is left. This wood produces larger berries.



FIGURE 4b. The short, lateral side shoots this bush will produce inferior berries and should be removed during pruning.

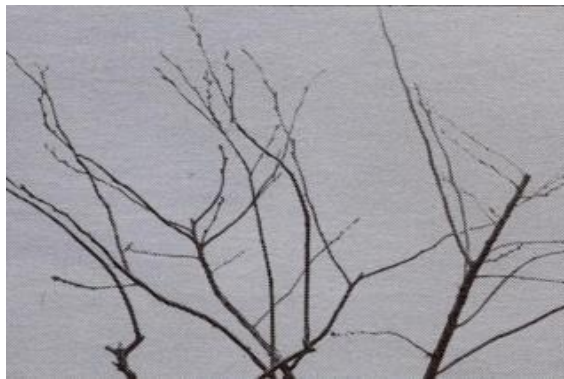


FIGURE 4a. The bushy growth on the left of the bush should be removed during pruning.

Unpruned bushes may degenerate rapidly into a thick, twiggy mass of unfruitful wood (Figure 5a, b).



Figure 5a. Young, bearing 'Earliblue' blueberry bush before pruning.



Figure 5b. The same bush after pruning.

In many instances, blueberry bushes are not pruned or are pruned insufficiently, resulting in overgrown plants with decreased vigor and production. Such plants are also more prone to certain diseases. This is quite common in many home plantings. These bushes can be rejuvenated and brought back into production by severe pruning. They are cut back to two to three inch stubs on four or five main branches near the center of the bush. The first summer after this method of pruning, there will be no crop. However, the bushes should bear a substantial crop the following summer and should be in full production in the second year. Some people may prefer to cut back one-half of each bush while the other half can bear fruit. The following year, the unpruned half will be cut back. This procedure will completely rejuvenate each bush in two years while providing a partial crop each year.

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