



Extension Extra

ExEx 6033
September 1999
Horticulture/Forestry

COLLEGE OF AGRICULTURE & BIOLOGICAL SCIENCES / SOUTH DAKOTA STATE UNIVERSITY / USDA

Pruning Deciduous Shrubs

by John Ball, associate professor of forestry, and
David Graper, horticulture extension specialist,
Horticulture, Forestry, Landscape and Parks Department

Shrubs are an important feature of any ornamental landscape. They accent the home, provide seasonal color, serve as shelter and food for wildlife and, if properly placed, reduce home heating and cooling costs. Unfortunately, if shrubs are improperly maintained, their value in the landscape can diminish and they may become liabilities rather than assets.

Why Prune Shrubs

One important means of maintaining shrubs is through pruning. Proper pruning can help the shrub retain its natural shape, enhance flowering and fruiting, and improve stem color on shrubs such as redosier dogwood that have ornamental bark. Pruning will also allow air movement and light to penetrate the lower portions of the shrub which will reduce pest problems and improve interior leaf retention. Pruning can also be used to maintain the necessary clearance from buildings and windows.

Pruning, as well as shearing, can be used to control the size of a shrub. However, if size reduction must be done on a frequent basis, the plant is probably wrong for the site and a better option may be replacement.

Pruning Versus Shearing

Pruning is the removal of wood formed during previous growing seasons. Pruning is used to maintain a more natural, informal appearance. Shearing, which is not covered in this bulletin, is the removal of part of the current year's growth. This is frequently employed to form hedges and usually results in a formal appearance of the plant.

Pruning Considerations

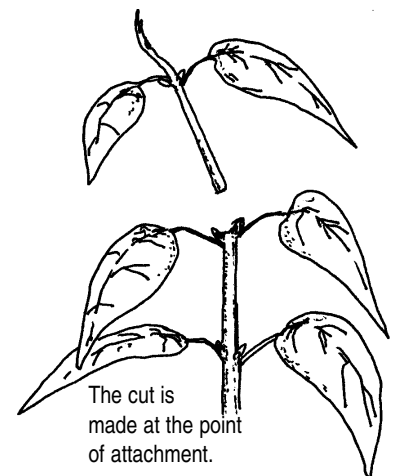
Consider two important cautions before pruning. First, pruning is best applied to established, healthy shrubs. Plants that are stressed from transplanting or other stresses such as insect defoliation should not be pruned until they recover. Second, certain diseases, most notably fireblight, can be transmitted from an infected plant to a healthy plant by pruning tools.

To reduce the possibility of spreading diseases, dip pruning tools in a 1:10 solution of household bleach and water before pruning the next shrub. This solution is mildly corrosive so rinse the tools in water after the solution to clean them. Oil tools after all pruning is completed.

Heading or Thinning Cuts

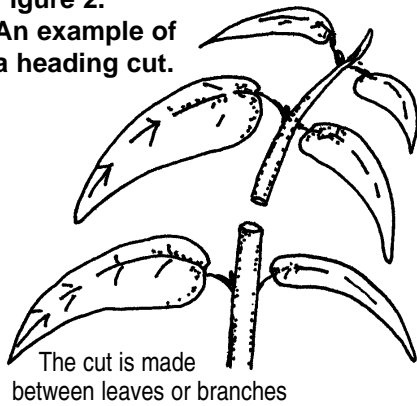
There are two primary means of making a pruning cut, either heading or thinning. Thinning is removing a branch back to its point of attachment to the stem or larger branch (Figure 1). Heading cuts are made without regards to branch attachment (Figure 2). This usually results in the formation of new shoots just below the cut.

Figure 1. An example of a thinning cut.



The cut is made at the point of attachment.

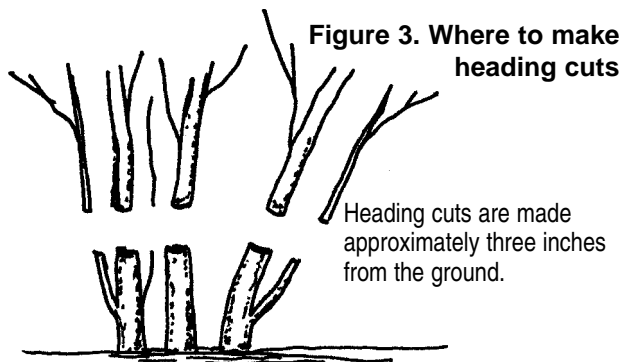
Figure 2.
An example of
a heading cut.



While heading cuts are generally not an acceptable means of pruning trees, they are an excellent means of pruning many shrubs. Exceptions are noted under the section on the proper use of thinning.

Unfortunately, many times these heading cuts are indiscriminately made at the wrong location in the shrub. Heading cuts made three to five feet above the ground will cause the new shoots to originate just below the pruning cut. This results in the top of the plant becoming thicker with foliage. This denser growth not only looks unnatural, but shades out the lower part of the shrub.

The proper placement for heading cuts is approximately three to four inches from the ground (Figure 3). This will result in the formation of new shoots near the base of the plant. These shoots will maintain a more natural growth habit.



Pruning With Heading Cuts

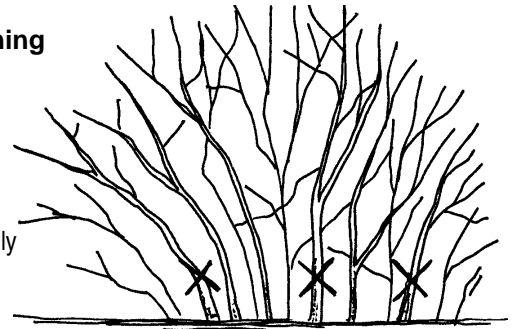
Renewal and rejuvenation are two types of pruning that employ heading cuts. The primary difference between them is in the number of stems pruned.

Renewal

Renewal pruning involves the annual or periodic removal of 1/6 to 1/3 of the oldest stems by heading cuts (Figure 4). This means that a shrub with six to nine stems will have between one and three stems pruned at about three inches.

Figure 4.
Renewal pruning

The oldest 1/6 to 1/3 of the stems are headed (identified by the X) at approximately three inches.



Renewal pruning is used to maintain or improve the appearance of a healthy shrub. It will maintain the natural shape of the shrub as well as enhance flowering. Rather than having the flowers limited to the top of the shrub, the bloom will be more evenly distributed throughout the entire plant.

Generally, small shrubs with a mature height of three feet or less have approximately 1/3 of the stems removed annually. Medium to large shrubs with a mature height greater than three feet should have only 1/6 of the stems removed annually.

Renewal pruning is conducted after flowering for spring- and early summer-flowering shrubs (Table 1) and during the dormant season for summer- and fall-flowering shrubs (Table 2). Shrubs grown for their form or bark are usually pruned during the dormant season (Table 3).

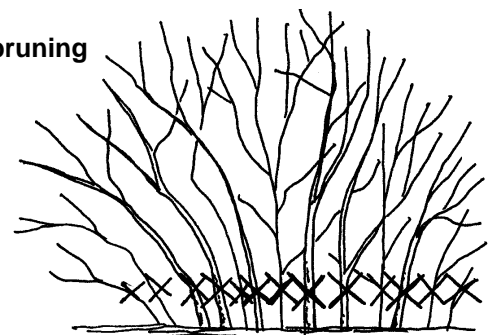
Rejuvenation

Rejuvenation pruning is performed when the shrub has been misshapen over the years by poor pruning or damage due to ice, snow or animals. Rejuvenation pruning involves the heading of all the stems (Figure 5).

While this may appear drastic, the shrub will recover very quickly and it is common for a shrub to regain half its former height during the first season.

Figure 5.
Rejuvenation pruning

All the stems (identified by the X) are headed at approximately three inches.



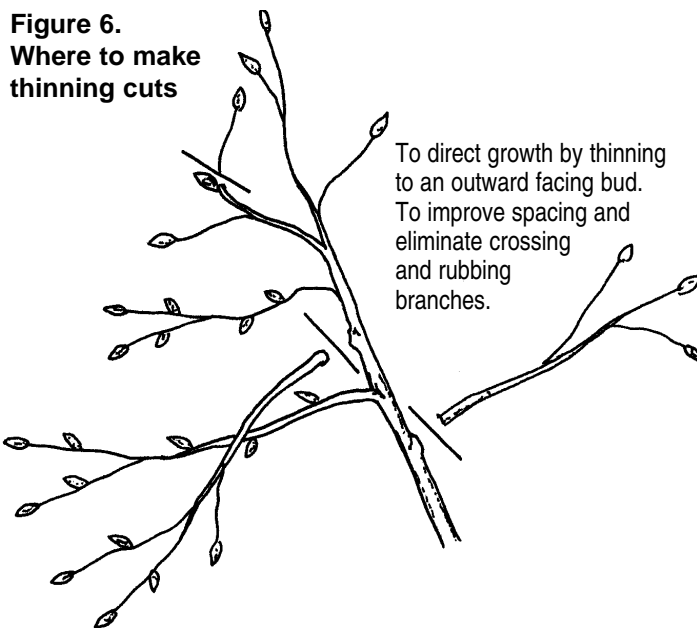
Rejuvenation pruning is always conducted during the dormant season with the expectation that flowering will not occur during the first year. Once the shrub has assumed the proper size and shape, it can be maintained by renewal pruning.

The Proper Use of Thinning

Some shrubs do not respond well to heading cuts. For example, burning bush (*Euonymus alatus*) forms only one or two main stems at the base. In addition, some people prefer to prune lilacs and other large shrubs to a single stem for a more tree-like appearance.

Thinning cuts direct growth and thin out the branches (Figure 6). Space the main branches for a medium-to-large shrub about four to six inches apart. If the branches are more crowded, then several should be thinned out until the desired spacing is achieved. Thinning should also be used to remove rubbing or crossing branches. Thinning cuts can also direct growth by pruning to a bud which faces the direction future growth is desired.

Figure 6.
Where to make thinning cuts



In many instances, both heading and thinning cuts are used to shape a shrub. Heading cuts are used to renew-prune the shrub and the remaining stems are thinned to direct growth and open the plant a little more. Thinning timing is the same as for heading cuts, after flowering for spring-flowering shrubs and during the dormant season for summer- and fall-flowering shrubs.

Pruning Tools

Using the proper tools will make the task easier and result in a more attractive appearance to the shrub. Two types of tools are used to prune shrubs: hand shears and loppers.

Shears

Hand shears, sometimes referred to as pruning shears, are used to prune branches less than an inch diameter. This size branch is small enough that the shears can cut cleanly without any twisting.

Loppers

Loppers are used for cutting larger diameter stems where more leverage is required. The greater handle length of loppers also permits renewal and rejuvenation pruning without the need to sit close to the ground.

Lopper handles are usually between 25 and 30 inches long and the better ones have strong handles made of ash, hickory or steel. Fiberglass or aluminum handles are lighter but often bend with continued use.

Hand pruners and loppers can be purchased with either an anvil or scissor blade. The anvil action has a single cutting blade that impacts a flat anvil. The scissor action, sometimes referred to as bypass, has a cutting blade that bypasses a hook to make the cut.

Unless very fine pruning (cutting 1/8 inch twigs or smaller) is required, the scissor action is preferred as it will make a cleaner cut. Always use scissor action blades so that the blade, not the hook, is held closest to the stem (Figure 7).

Figure 7.
How to position the hand shear.

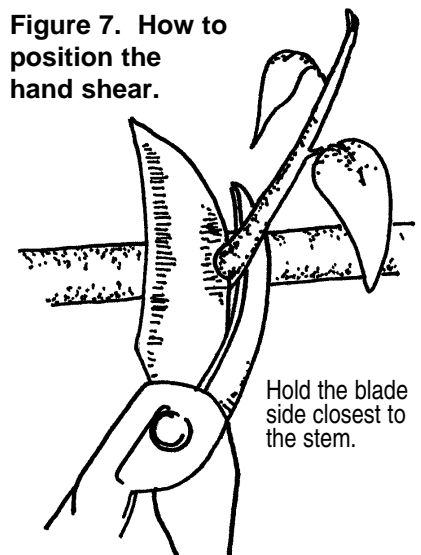


Table 1. Spring- and early summer-flowering shrubs. These are to be renewal pruned immediately following flowering. They form their flower buds the previous summer.

<i>Berberis</i> sp.	Barberries
<i>Caragana</i> sp.	Siberian Pea shrubs
<i>Cornus</i> sp.	Dogwood
<i>Deutzia</i> sp.	Deutzias
<i>Forsythia</i> sp.	Forsythias
<i>Lonicera</i> sp.	Honeysuckles
<i>Philadelphus</i> sp.	Mockoranges
<i>Spiraea x arguta</i>	Garland spirea
<i>Spiraea xi vanhouttei</i>	Vanhouttee spirea
<i>Syringa</i> sp.	Lilacs
<i>Viburnum</i> sp.	Viburnums
<i>Wiegela</i> sp.	Wiegela

Table 2. Summer- and fall-flowering shrubs. These are to be renewal pruned during the dormant season. They form their flower buds during the current summer so are not affected by spring pruning.

<i>Acanthopanax</i> sp.	Fiveleaf aralia
<i>Hydrangea</i> sp.	Hydrangeas
<i>Potentilla</i> sp.	Potentilla*
<i>Spiraea x bumalda</i>	Bumalda spirea (includes 'Anthony Waterer' and 'Goldfame')
<i>Spiraea japonica</i>	Japanese spirea (includes 'Little Princess')
<i>Tamarix ramosissim</i>	Tamarix

*Potentilla are spring- through summer-flowering so rejuvenation pruning during the dormant season will result in a two- or three-week delay in flowering.

Table 3. Shrubs grown primarily for their form or bark. These are to be renewal pruned during the dormant season.

<i>Cornus</i> sp.	Dogwood
<i>Cotoneaster</i> sp.	Cotoneaster
<i>Salix purpurea</i>	Purpleosier willow (includes Arctic Blue Leaf willow)

For more information, contact your county Extension educator or the Horticulture educator nearest you.

Find this and other publications from the South Dakota Cooperative Extension Service on the Internet at www.abs.sdstate.edu/abs/agnews.htm.



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Larry Tidemann, Director of Extension, Associate Dean, College of Agriculture & Biological Sciences, South Dakota State University, Brookings. Educational programs and materials offered without regard for race, color, creed, religion, national origin, ancestry, citizenship, age, gender, sexual orientation, disability, or Vietnam Era Veteran status.

150 copies printed by CES at a cost of 13 cents each. September 1999.