NATURAL RESOURCES CONSERVATION SERVICE

TREE / SHRUB PRUNING (ACRE)

CODE 660

MONTANA CONSERVATION PRACTICE SPECIFICATION

DEFINITION: Removing all or parts of selected branches or leaders from trees and shrubs

PURPOSE:

- Improve the appearance of trees or shrubs, e.g., ornamental plants and Christmas trees.
- Improve the quality of wood products.
- Improve the production of plant products, e.g., nuts, fruits, boughs, and tips.
- Reduce fire and/or safety hazards.
- Improve the growth and vigor of understory plants.
- Adjust the foliage and branching density for other specific intents, such as wind and snow control, noise abatement, access control, and visual screens.

SCOPE:

- On any area with trees or shrubs;
- On crop trees of high-value species (e.g., trees grown for select lumber, veneer, or Christmas trees);
- On trees where removing all or parts of branches reduces the fire and/or enhances the safety of an area;
- Where removal of lower limbs from all or part of the trees/shrubs enhances the beauty and recreational use of the area;
- On trees/shrubs to remove dead, broken, or diseased portions of the woody plant.

TREE/SHRUB PRUNING SPECIFICATIONS: Specifications for applying this practice shall be prepared for each site and recorded using approved specifications sheets, job sheets, and narrative statements in the conservation plan, or other acceptable documentation.

Specification MT660-2

General Specifications Applicable to all the Purposes Named Above

Prune trees according to the following steps:

1. Locate the branch bark ridge.
2. Find **A** (outside edge of branch bark ridge).
3. Find **B** (swelling where branch meets branch collar. If **B** is difficult to determine draw a perpendicular line from **A**: the angle **XAC** is equal to the angle **XAB** (See FIGURE 1). Stub the branch to be pruned using a first cut from below and a second cut from above.
4. Make the final cut on line **AB**.
5. Do not cut behind the branch bark ridge.
6. Do not leave stubs.
7. Do not cut into the branch collar.

Timing of shearing, branch removal and corrective pruning of high value tree species will be described to accomplish the intended purpose.

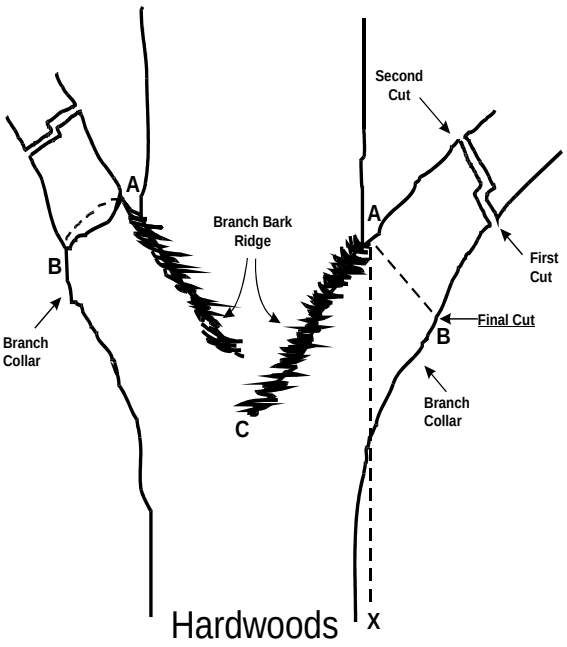


FIGURE 1. — Hardwood pruning

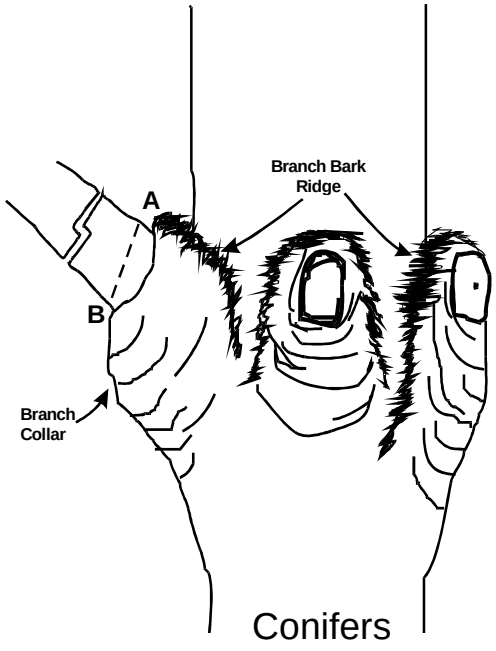


FIGURE 2. — Conifer pruning

Use any appropriate, properly sharpened and maintained pruning tools including pruning shears, loppers, pole saws, bow saws, and chain saws. The preferred tools for small and medium sized limbs are loppers, pruning shears, or a hand or pole saw with a curved blade that cuts on the down stroke.

Avoid pruning when tree/shrub is actively growing except for spring flowering shrubs.

Do not remove over one-third of the live crown in any one application and the resulting pruned stems should not exceed one-half the total height of the tree/shrub.

It is not necessary to paint or treat pruning cuts.

NRCS, MT
March 2004

Additional Specifications to Improve the Appearance of Trees or Shrubs

Pruning or shearing for quality Christmas trees:

Good crown density is one of the principal requirements of quality Christmas trees. Trees with poor crowns resulting from rapid growth can sometimes be improved by two methods:

1) Pruning–lower branches from the live crown are removed to the extent that the rate of growth will be severely checked;

2) Shearing–the leader and the tips of the branches are cut back to shorten terminal growth, stimulate lateral growth, and improve the symmetrical form of the tree.

Pruning

- Trees should not be too tall to work conveniently from the ground.
- At least the lower two-thirds of the live crown should be removed, or high enough to give good basal whorl, and severely enough—usually 1/2 to 2/3 of the live crown—to slow the growth. This may also be dependent on the shearing operations planned.
- Trees on better sites with inherently thin crowns generally do not respond well to pruning.

Shearing

- Shearing should be done to improve crown symmetry and crown shape.
- Begin shearing when trees are 3 to 5 years old (approximately 3 feet in height) and terminal leader growth exceeds 12 inches. Continue shearing, usually every other year, until the trees are marketed.
- The best period for shearing is:

  Pines—July through August

  Spruces and Firs—November through March
- Side shearing should be done to produce a taper of about 40 to 70 percent. Taper is the base width in relation to the height.
- Cut the leader as necessary to control height growth to about 8 to 12 inches. Shear above a bud at a 45-degree angle to the stem.
- All extra leaders shall be removed.
- Basal pruning should be done to form a handle to assist in handling the tree when harvested.

Additional Specifications to Improve Growth and Vigor of Trees and Shrubs

The ideal time for pruning is during the dormant season before new growth starts. Trees may be pruned at any time for hazard situations or to repair storm damage.

Dead and diseased branches should be removed to enhance appearance and improve health of the trees/shrubs.

When pruning plants with fungal disease infections, sanitize pruning tools between each cut.

Prune shrubs to improve their shape without changing their natural form to stimulate blooming and improve growth.

Spring flowering shrubs should be pruned immediately after they have bloomed to stimulate wood growth through the current growing season and abundant blooms the following spring.

Summer flowering shrubs should be pruned during the dormant season before new growth starts.

Specification MT660-4

Additional Specifications to Improve the Quality of Wood Products

Native species in order of priority for pruning are:

a. Ponderosa pine
b. Lodgepole pine, 15 to 25 years old
c. Western larch
d. Douglas fir

Western larch and Douglas fir do not respond well to pruning because of their tendency to resprout along the stem where live branches have been removed. Dead branches can be removed with only a slight chance of resprouting.

Give priority to the most productive sites.

Prune 50 to 100 crop trees per acre that have a high potential value and that will be left to grow to maturity. Hold crop trees at least 20 years after pruning.

Select straight, dominate or co-dominate trees free of disease, forks, or other defects and properly spaced.

Remove the lower branches when tree diameters are 4 to 10 inches diameter breast height (DBH). All branches will be removed to a height of 18 feet.

Do not remove over 1/3 of the live crown in any one operation.

Pruning shall be done in conjunction with Field Office Technical Guide (FOTG), Section IV–Practice Standards and Specifications, 666–Forest Stand Improvement or other activities that manage for maximum growth.

Pruning shall be done during the dormant season before new growth starts.

Pruned branches will be cut into smaller pieces and scattered away from the base of the tree.

Disease branches should be burned.

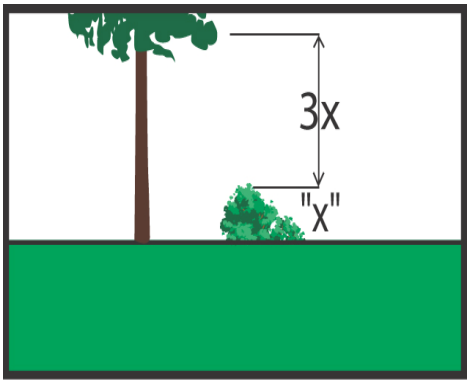
Additional Specifications to Reduce Fire and/or Safety Hazards

Limbs at campsites, trails, and other recreational use areas shall be pruned to a height of 8 to 12 feet to facilitate movement.

Do not prune trees touching or near utility lines. Contact the appropriate local utility authority for assistance.

For hazardous fuel reduction, prune trees to three times the height of the surrounding shrubs. See CHART 5.

CHART 5. Vertical Separation Distances Needed Between Fuel Layers



Prune limbs to needed heights to obtain necessary scenic views on recreational and personal property.

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