

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE SPECIFICATION GUIDE SHEET**

**TREE/SHRUB PRUNING**

(Acre)

**CODE 660**

Tree/Shrub pruning has several purposes including the improvement of timber health and quality, sanitation, air quality (in wild lowbush blueberry land), and wildlife food (plant products) and cover improvement.

**NOTE: This is a technical specification guide sheet and is program neutral. NOT all work performed under this specification is eligible for financial assistance. Review individual program rules and guidelines for eligible practice purposes, components and costs.**

**IMPROVEMENT OF LUMBER QUALITY**

This pruning is primarily for the removal of selected branches from lower stems to improve the quality of future wood products, in areas where the quality of the final product can be improved and the site quality is high enough to economically produce lumber quality trees.

Selection of trees to be pruned will be consistent with technical specifications for pruning and silvicultural principles.

Pruned trees will be of a species, form, and vigor that indicate future potential as sawtimber. Damaged or diseased trees, trees with excessive branches >2 inches dbh, multiple crooks, sweep, or other stem or

crown defects that cannot be remedied, will not be selected.

On fair to excellent growing sites, any species of hardwood or softwood may be pruned when it is considered economically prudent. For example, white and red pine (for poles) may be pruned when they occur on outwash soils rated fair to excellent for productivity.

Pruned trees will be selected with the intent of retaining pruned trees until maturity.

Pruned trees will be 3-11 inches dbh (diameter at breast height), and at least 25 feet tall, with a live crown ratio >30%.

Pruned trees will have been released on 3-4 sides of the crown by removal of competing trees, prior to pruning, within the last 5 years, and be free to grow.

At least 20 trees per acre will be pruned. Only marked trees will be pruned. The maximum number of pruned trees is as follows:

- a. 80 trees per acre in hardwood stands
- b. 100 trees per acre in mixedwood stands
- c. 120 trees per acre in white pine or other softwood stands.

All trees to be pruned must be marked, unless otherwise agreed to or approved of beforehand, on the stem at approximately eye-level with white or blue long-lasting paint.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current standard, contact the Natural Resources Conservation Service. Contact Sally Butler, NRCS Forester, 207-778-4767 X106 or email comments to [sally.butler@me.usda.gov](mailto:sally.butler@me.usda.gov)

Trees to be pruned shall be marked using a system of horizontal or diagonal slashes or bars to indicate the maximum height to which the tree is to be pruned:

- a. 1 bar for 17 feet
- b. 2 bars for 13 feet
- c. 3 bars for 9 feet
- d. 4 bars for 25 feet (white pine only).

Pruning must be done with a saw. Use of chainsaws on a pole is discouraged.

Pruning must leave trees with a live crown ratio >30%. Pruning shall apply only to that portion of the trunk in need of pruning.

Limbs will be cut as close to the bole as possible without injuring or removing the collar of tissue at the base of the branch (branch collar). Live branches greater than 2 inches in diameter will not be removed. Dead branches of any size may be pruned.

Pruning of softwoods may be done anytime. However, dormant season is usually preferable. Hardwoods should be pruned only during the dormant season.

To prevent wind damage, trees along the windward edge of a stand should not be pruned (or thinned).

Cut limbs are to be removed, chipped for wood mulch, lopped so they lie close to the ground, or used to make other wood products, such as baskets, florals, and wreaths, or construct brush piles for wildlife.

Use of tree pruning paint is not necessary or recommended because of labor and cost factors. The value of painting is aesthetics.

### **GENERAL HEALTH/ AESTHETIC/ ORNAMENTAL/OTHER PRODUCTS**

Remove diseased, dead and dying limbs. Also remove any crossing branches on young trees and shrubs.

Remove limbs which are a hazard to the public. In areas of human use such as campgrounds, they are to be removed to a height of 8 feet. On bridle paths, limbs are to be removed to a height of 12 feet. On snowmobile or cross-country ski trails limbs are pruned to a height of 8 feet.

Remove tree limbs which interfere with the growth of flowering shrubs or other understory plants.

Remove limbs which interfere with the viewing of a scenic area.

Tree limbs will be cut flush with the branch collar (see 1), or at an angle to allow water to drain. Large limbs are to be undercut to prevent peeling or stripping of the tree's bark.

For deciduous shrubs, it is important to cut slightly above a bud with the cut sloping away from it at a gentle angle. When hard pruning, cut growth down to new growing points at the woody base of the shrub.

Removing one-third of old growth, or of wood which has flowered in the previous season, encourages vigorous flowering and rejuvenation of older shrubs.

Certain young shrubs needing time to become established will gain a more compact shape and finer foliage if the previous year's growth is cut back by half in early spring.

Cut limbs are to be removed, chipped for wood mulch, lopped so they lie close to the ground, or used to make other wood products, such as baskets, florals, and wreaths, or construct brush piles for wildlife.

Use of tree wound dressing or "pruning paint" is not necessary but may be desirable for aesthetics.

## CORRECTIVE/ SANITATION

### 1. WHITE PINE BLISTER RUST

To improve the health and vigor of white pine dominated forest stands and reduce the need for pesticides, selected white pine will be “prunable” i.e. generally merchantable (no defects) and free of “lethal” cankers (bole cankers or branch cankers with margins < 6 inches from the bole).

Pruned trees will be selected with the intent of retaining pruned trees until maturity.

Prune a minimum of 8 feet on pole and sawtimber-size trees. On 6 to 10-foot tall canker-free, sapling-size white pine prune no higher than 50% of a tree’s height, to maintain a healthy crown (e.g. on a 6 foot tree you would only prune up 3 feet). You can prune up to 8 feet as the tree grows taller. Prune a minimum of 20 trees and a maximum of 120 trees per acre. Avoid pruning in spring as bark may be damaged more easily.

Prune needles attached directly to bole, as they provide blister rust with direct access to the bole.

Check and prune basal branches. White pine commonly has small branches laying close to the ground or hiding in the duff then resurfacing a foot or more from the tree with green needles. These are easy to miss if you don’t “root around” a little at the base of the tree for them.

Promptly remove all pruning debris.

See “Improvement of Lumber Quality” section in this specification for other general how-to information on pruning methods, etc.

**NOTE:** thinning is recommended **AFTER** pruning in order to correctly identify healthy merchantable trees that need to be retained.

### 2. SNOW/ ICE DAMAGE

To improve the health and vigor of the forest stand and reduce the future need for pesticides, selected trees of any age may be pruned of broken or damaged branches as long as pruning leaves no less than 50 percent live crown and the tree is otherwise healthy.

Remove weak, narrow-angled, v-shaped crotches to prevent future damage.

Pruned trees will be selected with the intent of retaining pruned trees until maturity.

See “Improvement of Lumber Quality” section of this specification for other general how-to information on pruning methods, etc.

## PROTECTION OF AIR QUALITY IN WILD LOWBUSH BLUEBERRY LAND

To protect air quality in wild low-bush blueberry land prune blueberry plants by flail mowing every other year instead of burning.

Pruning is done prior to the non-bearing season, either in the fall, after the first killing frost, after harvest, or early spring before plants break dormancy.

Slash can be left on field as mulch, if it doesn’t cause a fire or pest hazard. Mulch will be added where bare areas occur as result of mowing. See Code 484, Mulching Practice Standard for criteria requirements.

This practice may also be used in conjunction with Code 500, Obstruction Removal Practice Standard to provide a level field for equipment.

Refer to Code 660 - Pruning Blueberries Job Sheet for practice specifications.

## CHRISTMAS TREES

Trees planted for Christmas trees are pruned to enhance their appearance and increase sale value. Trees are pruned to develop the desired shape and density (usually an inverted cone and moderately dense).

Pruning for denser growth is to be done in late spring after elongation is nearly complete, while the leader is soft and succulent. Approximately one-half of the new growth is removed from each “candle” or bud as it is expanding.

Spruce and fir may be pruned for shape anytime of the year. Fall fir pruning can be used for making wreaths, etc. (also known as “tipping”).

Multiple leaders are to be removed when shearing. Leave only one strong leader.

Leaders are usually cut back 12 to 14 inches for pines and 8 to 12 inches for spruce and fir. Prune back to a lateral whorl that is actively growing and well-needed. Spruce should be cut back to within approximately 1/4 to 3/8 inches of a single live bud.

After final shearing, trees are to be allowed to grow one season before harvest.

Any tool may be used which produces a clean cut without tearing the branch or stripping the bark. Examples are: hand clippers, hedge trimmers, various knives, and sickles.

## **TREES/SHRUBS FOR WILDLIFE**

### Apple

Examine the apple tree and remove all multiple stems, leave one main, healthy stem uncut. Cut the multiple stems as close to the ground as possible.

Apple trees should be pruned in late winter or early spring before leaf out and after danger of severe cold has passed.

Remove all dead branches from the tree. Disease and insect-infested branches should be burned or removed from the site.

Remove approximately one-third of the remaining live growth. Try to open up thick

clusters of branches. Clip off one or two feet from the ends of vigorous side branches. Do not remove the vigorous spur branches on the side of larger branches, which are the apple-bearing ones.

If the tree is a young sapling, the top can be cut off to encourage side branching.

When cutting competing woody vegetation (releasing) around an apple tree, leave some vegetation on the north side of the tree to provide wildlife cover.

### Other trees/shrubs

A broken, jagged limb 3-6” beyond branch collar will usually result in a cavity which may result in improved habitat for cavity nesting birds and animals.

Appropriate pruning of shrubs will result in more fruit. For example, blueberries bear more fruit on 1-year shoots than on old mature branches.

## **DOCUMENTATION**

All categories require the following design information. You may use the job sheet available for this practice or other approved project plan.

1. Landowner and Design Preparer name and address
2. Property Location, including town and county, and NRCS Field Office
3. Practice name, code, justification, amount, estimated cost, and time schedule.
4. Description of specific work to be performed and its location and size, as well as written instructions for contractor and /or owner.
5. Maps of property and practice locations, including a lat/long for boundary corners and practices.

6. Legal obligations, including property tax status and required permits if needed.

Pruning Practice Design, installation and checkout, except for Pruning in Blueberry land, shall include detailed written description, map and practice layout, modifications and as-builts including:

1. Location of Stands or area(s) where pruning is proposed and actually pruned (Lat. /Long.)
2. Total acreage to be pruned and actually pruned.
3. Tally of trees proposed and actually pruned, by species and height of pruning
4. All trees to be pruned must be marked, unless otherwise agreed to by all parties beforehand, on the stem at approximately eye level with long-lasting paint. Mark must indicate the maximum height to be pruned or other requirements.
5. Treatment specifications, modifications and as-builts including method proposed and used.
6. Specifications for the protection of other natural resources including but not limited to water, soil, wildlife, and non-target plants.

## REFERENCES

Berg-Stack, Lois. 1998. Pruning Woody Landscape Plants. University of Maine Cooperative Extension, Bulletin #2169.

University of Maine Cooperative Extension. Yankee Woodlot Series # 6 - Working With It. Bulletin #7079.

The Profit in Pruning Forest Fact Sheet. 1986. Maine Forest Service.

The National Arbor Day Foundation. 1999. Tree City USA Bulletin No. 1-*How to Prune Young Shade Trees*.

Pruning Handbook. 1985. Sunset Books.

Connecticut-Rhode Island Christmas Tree Growers Manual. Connecticut Cooperative Extension.

University of Maine Cooperative Extension. 2004. Wild Apple Trees for Wildlife. Bulletin 7126.

Chris Schnepf. White Pine Blister Rust: Pruning Can Increase Survival. UI Extension Forestry Information Series, Insects and Diseases No. 5. University of Idaho Cooperative Extension.

Pruning Lowbush Blueberry Fields, Fact Sheet No. 229. UMaine Extension No. 2168. February 1988.