

Forest Stand Improvement

Conservation Practice Job Sheet

666

Participant Name:

Tract #:

Field #

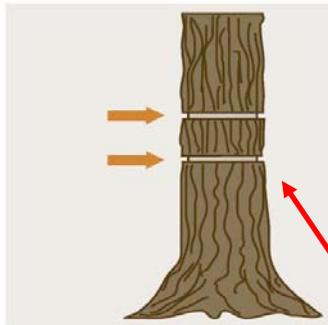
INFORMATION ON THIS JOB SHEET IS CONSIDERED TO BE PART OF THE CONSERVATION PLAN AND/OR CONTRACT.

Purpose

Forest stand improvement involves felling or deadening selected trees or understory vegetation to manipulate tree stocking/spacing and to control competition from over-story, mid-story and under-story species. It is most commonly accomplished by hand (using a number of different tools/implements) for a wide variety of management objectives including: increasing the quantity and quality of non-timber products, initiating or improving stand regeneration, reducing wildfire risk, improving forest health, improving wildlife habitat and others.

Forest stand improvement is often done concurrently with other forestry and wildlife management practices as part of a resource management system for a conservation management unit.

Forest Stand Improvement Techniques



The most effective non-removal methods for deadening standing trees, shrubs, and vines typically involves the use of herbicides. Frilling, girdling, and cut stump are effective techniques for forest stand improvement and can be done without the use of chemicals. However, physical methods of deadening standing trees that do not use herbicides are generally less dependable (particularly with hard-to-kill species such as maple, hickories, and dogwoods) and require more time to be effective than those techniques that incorporate the addition of herbicides into the treatment.

Two girdling cuts with a chainsaw to a 1" depth can be a very effective means of deadening a tree.

Four commonly applied forest stand improvement techniques that use herbicides include frilling, girdling, basal bark spraying, and cut stump application. When using herbicides, it is essential that the entire product label be read before use. The label contains complete instructions for use, along with other valuable information such as personal and environmental safety considerations and application procedures. The manufacturer's label will also list information about the effectiveness of the herbicide in controlling different species of trees, shrubs, and vines. All herbicides are not equally effective in controlling different species.

Frilling (Hack and Squirt)

Use a hand axe, hatchet, machete, or similar device to make a frill ("hack") or cut, at a downward angle. Recommended 1 "hack" per inch diameter of tree stem. Cuts should penetrate through the bark into living cambium tissue (outer wood next to the bark) and produce a cupping effect to hold the herbicide. Spray 1 "squirt" (use common household or garden sprayer) directly onto the blade to deliver herbicide to the cut. Not recommended for use during heavy sap flow in spring.



Girdling

Girdling involves “ringing” the tree by use of a chainsaw. Make a cut 1” deep all the way around the tree at waist height. Be sure the cut is continuous, making a complete ring around the tree. This method is generally used to control trees larger than 5 inches in diameter. Apply herbicide within 30 minutes to the fresh cut. 2 rings cut approximately 6 inches apart is also effective without herbicide. However, young fast growing trees can callus over the girdles and recover, so timing is important when herbicide is not applied. Girdling in this manner is more effective after full leaf out.



Basal Bark Spray

Basal spraying, or sometimes referred to as basal bark application, is a technique to deaden small trees less than 6 inches in diameter, shrubs, and occasionally vines, by spraying the lower 12 to 18 inches of the stem with a herbicide. Using a low pressure backpack sprayer, thoroughly wet the lower 12 to 18 inches of the stem, completely encircling the root collar area. Be cautious not to overspray to the point of runoff into surrounding soil. Follow manufacturer’s label directions specifically for basal bark application. To increase effectiveness of basal spraying, the treatment should be timed for dormant (winter) periods.



Cut Stump

Where felling of the undesirable tree is the chosen technique, there is often a high probability that the stump will sprout. Sprouting can be eliminated by treating the stump with herbicide. Spray or paint the cambial area (outer wood next to bark) of the freshly cut stumps immediately, or within 30 minutes, unless specifically directed otherwise by the herbicide label. If an oil-soluble mix is used, spray the sides of the stump to the root collar and the cambial area until thoroughly wetted.



Before using any herbicide, read and follow the product label.

Labeled pesticides undergo rigorous testing in a variety of site conditions. Following recommendations on the manufacturer's label prevents many potential problems that may arise from incorrect product use. The following references provide more detailed information regarding compatible herbicide usage with the treatment methods described in this document.

“Herbicides for Small Scale Forestry Operations” , (7/99) Dr. Jeffrey W. Stringer, University of Kentucky College of Agriculture, Forestry Extension:

http://www.ca.uky.edu/forestryextension/publications_forestmngnt.php

“Herbicides and Forest Vegetation Management ” (07) David R. Jackson and Dr. James D. Finley, et al; Penn State, College of Agricultural Sciences, School of Forest Resources

<http://pubs.cas.psu.edu/freepubs/pdfs/uh174.pdf> & <http://fvm.cas.psu.edu/treecontrol.htm>

Forest Stewardship/Forest Management Plan:				
Plan prepared by:		Plan date:		
Practice documentation:				
Field or Stand #	Crop Tree(s) Species	Basal Area - Before	Basal Area – After	Type of Thinning*
Recommended treatment method(s):		Notes:		
<ol style="list-style-type: none"> 1. Frilling (“hack & squirt”) 2. Girdling 3. Basal bark spray 4. Cut Stump 		<p>Additional instruction: _____</p> <p>_____</p>		

Additional Information & Instruction :
<p style="text-align: center; color: red;"><u>CAUTION:</u> Before operating machinery or felling trees in and around forestland, check for any utilities (underground or overhead)!!!!</p> <p>Follow all applicable local, state, and federal laws and regulations</p> <p>Pesticide application is regulated; obtain necessary state certifications as required.</p> <p><u>Tree felling may adversely affect the Indiana Bat, a federally listed Endangered Species if conducted at the wrong time of the year. To ensure protection of this endangered species, the following guidance must be followed anytime trees are felled as part of this practice. Trees with a diameter at breast height (DBH) of less than 5 inches may be felled anytime during the year. Other trees may be felled anytime during the year provided the trees do not have the following characteristics: tree species with exfoliating bark such as shell and shag bark hickories and white oak species; dead and dying trees with exfoliating bark, broken tree tops, splintered or split areas; trees with cavities or hollowed areas. Felling of trees with the above identified characteristics must be completed between November 15th and March 31st. Failure to follow this guidance may jeopardize your Farm Bill Program contract payments.”</u></p>

Operation and Maintenance:			
Operation – Periodically inspect the stand to ensure that objectives are achieved and identified resource concerns have been met.			
Maintenance - Inspect the stand periodically for insect damage, disease problems, and encroachment by invasive species. Protect from wildfire, livestock grazing and other potential damages.			
Maps and Field(s) Location:			
<i>See conservation plan map for location of forest stand improvement activities.</i>			
Certification:			
<i>Job Sheet</i>	Prepared by:	Title:	Date:
<i>Certification</i>	Meets NRCS standards and specifications? YES NO	Title:	Date:
	Certification by:		

Additional Requirements and/or Recommendations from NRCS, KDF, KDFWR, or Certified TSP:

"The US Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited basis apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD)." To file a complaint of discrimination, write to USDA, Assistant Secretary for Civil Rights, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, S.W., Stop 9410, Washington, DC 20250-9410, or call toll-free at (866) 632-9992 (English) or (800) 877-8339 (TDD) or (866) 377-8642 (English Federal-relay) or (800) 845-6136 (Spanish Federal-relay). USDA is an equal opportunity provider and employer.