

Landowner:		Farm #:
Field(s):	Acres:	Tract #:
Soil Map Unit(s):		County:
Designed By:		Approved By:
		Signature:
Date:		Date:

DEFINITION: Treating areas to improve site conditions for establishing a forest or woody planting.

PURPOSE: (check all that apply)

- Encourage natural regeneration of desirable woody plants
- Permit artificial establishment of woody plants

SPECIFICATIONS:

Choose an appropriate site preparation method (mechanical, chemical, burning) to protect any desirable vegetation. (see Table 1)

- Maintain necessary filter strips and/or riparian forest buffer areas.
- Remaining slash and debris should not create habitat for or harbor harmful levels of pests, or hinder needed equipment operations, or create undue fire hazard.
- Erosion and/or runoff will be controlled.
- Soil compaction and soil displacement will be minimized.
- Comply with applicable federal, state, and local laws and regulations.
- All chemicals will be used in accordance with label guidelines. Chemical containers should be disposed in a safe, approved manner.
- Livestock will be fenced out to prevent damage to site preparation areas and woody plants.
- Under planting should only be attempted on upland sites with regeneration-deficient stands or on upland sites where conversion to pine is desired.



Never use fire as a site preparation tool without developing a prescribed burning plan for the site.

Cropland/Grassland

Residue cover > 50% may require site preparation. Use one or more of the following methods:

- Mechanical: Expose mineral soil. Limit tillage to no more than 2 months prior to planting or seeding. Till earlier if flooding is a possibility. Fall tillage is permissible for early spring planting. Use contour strip tilling on slopes greater than 3 percent. Planting strip widths should be greater than 3 feet in width with inter-widths of 5 feet or greater. Ripping or deep soiling may be necessary to break-up restrictive subsoil pans.
- Chemical: Apply appropriate chemical(s) in 3 to 4 feet bands over projected planting rows. If slopes exceed 3 percent, apply on contour. Use WIN-PST to evaluate leaching and runoff potentials. Pesticide/soil hazard risk ratings of "extra high" or "high" shall be accompanied by mitigating practices and/or substitution of pesticides to lower risk ratings. Use low volatile formulations. Some chemicals need extended time to work. Consider applying chemicals in the fall or early spring prior to establishment.
- Prescribed Fire: Conduct burning only under controlled, predetermined conditions as outlined in a prescribed burn plan.

Woodland

Desirable Vegetation.

Hardwoods

- Reduce competition from woody plants less than 2 inches DBH and herbaceous competitors by mechanical or chemical means before under planting. For under planting with pine, kill all existing stems less than 8 inches DBH.
- Make a harvest cut and leave a well-spaced overstory of about 55 percent stocking. No cutting is necessary if the stand is already 55 to 65 percent stocked.
- Remove the remaining overstory during the dormant season after 3 to 6 years. For pine under planting, remove overstory within 1 to 3 years.

Desirable Vegetation.

Pines

- Reduce competition from hardwood plants less than 8 inches DBH and herbaceous competitors by mechanical or chemical means before under planting.
- Make a harvest cut and leave a well-spaced overstory of about 55 percent stocking. No cutting is necessary if the stand is already 55 to 65 percent stocked.
- Remove the remaining overstory during the dormant season after 1 to 3 years.

Undesirable Vegetation

Harvest any merchantable material. Then use one or more of the following site preparation methods:

- Mechanical: Remove remaining cover to expose mineral soil. Pile debris in windrows. On slopes greater than 3 percent, operations should be on the contour. On land that is gullied, some additional grading may be necessary.
- Chemical: Apply appropriate chemical(s) in 3 to 4 feet bands over projected planting rows. If slopes exceed 3 percent, apply on contour. Use WIN-PST to evaluate leaching and runoff potentials. Pesticide/soil hazard risk ratings of “extra high” or “high” shall be accompanied by mitigating practices and/or substitution of pesticides will lower risk ratings. Use low volatile formulations. Some chemicals need extended time to work. Consider applying chemicals in the fall or early spring prior to establishment. *Always follow label instructions.*
- Prescribed Fire: Conduct burning only under controlled, predetermined conditions as outlined in a prescribed burn plan.

Table 1. Use the site preparation method(s) circled below:

Cover	Establishment Methods:		
	Direct Seeding	Natural Regeneration	Seedlings
<i>Cropland</i> Residue level < 50% cover	C,N	C,N	C,N
>50% cover	C,M,MC	C,M,MC	C,M,MC
<i>Grassland</i>	C,M,MC	C,M,MC	C,M,MC
<i>Woodland</i> understocked	not recommended	C,H	C,H
undesirable	C,M,MC,B,MB,CMB,H	C,M,MC,B,MB,CMB,H	C,M,MC,B,MB,CMB,H

- | | | | | | |
|----|---|------------------------|-----|---|----------------------------------|
| M | - | Mechanical | MC | - | Mechanical and chemical |
| C | - | Chemical | CB | - | Chemical and burning |
| B | - | Burning | CMB | - | Chemical, mechanical and burning |
| N | - | Not necessary | H | - | Harvest cut |
| MB | - | Mechanical and burning | | | |

If a permanent cover crop is needed or desired after site preparation, use the indicated species at the specified rates to control potential erosion or weed competition between woody planting rows:

Species	Rate - PLS/Ac	Acres	Total Site PLS
Ladino clover	2.25 lbs		
Annual lespedza	5.6 lbs		
Orchardgrass	3.2 lbs		
Kentucky bluegrass	1.6 lbs		
Timothy	2.3 lbs		
Redtop	1.3 lbs		
Virginia wild rye	7.0 lbs		

Note: Rates are for good planting conditions. Increase rates by 50% for fair planting conditions.

ADDITIONAL COMMENTS AND RECOMMENDATIONS:



Mechanical site preparation, such as disking (left) or bedding (below), is often necessary in high crop residue fields to create a suitable seedbed for establishing woody plants.

