

FOREST SITE PREPARATION

S. C. Practice Job Sheet 490

Prepared for: _____

Prepared by: _____

Farm: _____ Tract: _____ Date: _____



Bedding is a common forest site preparation method in wet coastal plain soils.

DEFINITION

Treating areas to improve site conditions for establishing a forest.

PURPOSE

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

CRITERIA

The method, intensity and timing of site preparation should match the limitations of the site, equipment, and the requirements of the desired woody species.

An appropriate site preparation method should be chosen to protect any desirable vegetation.

Remaining slash and debris should not create habitat for harmful pests.

Remaining slash and debris should not hinder equipment operations or create a fire hazard.

Soil compaction and displacement must be minimized. Sites with slopes in excess of 8 percent should not be prepared with a conventional bulldozer blade or root rake due to the erosion hazard.

All chemicals must be applied in accordance with label guidelines.

Erosion and/or runoff should be controlled. Soil disturbing site preparation should be done on the contour.

Comply with applicable federal, state, and local laws and regulations during the installation, operation, and maintenance of this practice including SC's Best Management Practices.

The following table shows the recommended horizontal widths in feet for forested filter strips (Streamside Management Zones - SMZ's) between the bottom of a mechanically site-prepared area and stream or lake.

	% Slope of Adjacent Lands				
	0-5	6-10	11 - 20	21 - 45	46+
Stream or Waterbody Type	SMZ Width Each Side (feet)				
Intermittent	50	50	50	50	50
Perennial	50	50	50	50	50
Perennial, Trout waters	50	66	75	100	125
Public water supplies (streams / reservoirs)	70	70	90	130-210	210 - 300

NOTE: These are recommended minimum widths. Under given condition and need combinations, the responsible manager will want to expand or contract the distances yet fully protect the stream channel and water quality. SMZ width is measured along the slope in linear feet on each side from the edge of the pond, lake or stream to the toe of the road, skid trail, or other surface disturbance. **CAUTION:** Extra care is recommended within SMZs near public water supplies (streams and reservoirs) to reduce the risk of sudden and severe contamination problems due to failure of BMPs during unusual storms.

Piles and windrows should be kept as narrow as possible and on the contour. Soil should be kept out of windrows so surface water will pass through and not develop channels which cause gully erosion. Leave breaks in windrows at least every 300 feet.

Sites having slopes in excess of 8 percent should not be prepared with a conventional bulldozer or root rake due to the erosion hazard.

Burns should be made as soon after logging or chopping as weather conditions permit.

Burns made just before direct seeding expose seed to mice and birds; so seed should be treated with protective chemicals.

Beds should be at least 5 inches above original ground level after settling and planting. Width of beds will vary according to type of equipment used; distance between centers of beds will normally be from 10 to 12 feet.

The area to be bedded must be sufficiently free from logging debris and vegetation so a well-shaped bed free of air pockets can be formed. Beds should be sufficiently high to elevate seedlings above standing water and should be oriented to channel water into vegetated surfaces. Forestry bedding must comply with wetland best management practices.

When pine species are being planted in heavy grass sod or ground cover, disking, scalping, furrowing or broadcast herbicide can be specified where dense grass, legumes, or weeds (bermudagrass, carpetgrass, fescue, broomsedge) are present. A herbicide/scalping combination may also be recommended.

When pines are to be planted in heavy brush or shrubs, apply foliage spray, disk, or plow according to the size and type of undesirable brush or shrubs. On slopes exceeding 9 percent, disking or plowing should

be done on approximate contours on strips 3 to 4 feet wide, leaving alternate strips undisturbed.

Preparing Sites for Natural Seeding

An adequate seed supply must be present for natural seeding. Site preparation measures to encourage natural seeding should be employed only with light-seeded intolerant species whose seed are wind-disseminated. This includes the native pines, cottonwood, and yellow poplar. Most of the heavy-seeded, tolerant hardwoods will reproduce satisfactorily with fire and grazing excluded. After establishment, desirable seedlings should be released, where necessary, from competing undesirable species.

Seed trees should be dominant trees of good quality. The following table shows the number of pine seed trees needed to produce enough seed and also provide enough volume to attract a logger when reproduction is established and the seed trees are removed. They also provide insurance against loss to lightning and windthrow.

Minimum Recommended Number of Pine Seed Trees/Acre

DBH	Shortleaf	Loblolly	Longleaf	White
10	20	12	55	12
12	14	9	38	9
14	12	6	28	6
16+	12	4	21	4

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