

WEED CONTROL FOR TREE AND SHRUB ESTABLISHMENT

CONSERVATION DESIGN SHEET

612 July 1997



Natural Resources Conservation Service

Michigan



Fabric weed barriers are one method available to obtain effective weed control in tree and shrub plantings

Why Is Weed Control Necessary?

Controlling weeds in newly established plantings increases survival, growth, and vigor by reducing competition for light, water and nutrients. Effective weed control helps to maintain the specified plant density which is a requirement in NRCS Standard number 612-Tree and Shrub Establishment.

Where Does Weed Control Apply?

Weed control for tree and shrub establishment applies anywhere it is desirable to establish or maintain woody vegetation for the purposes of water quality protection and improvement, aesthetics,

wood production, recreation and wildlife benefits, and wind and/or sight barriers.

Where To Get More Assistance

Additional assistance may be obtained from the local office of a Michigan Conservation District, USDA Natural Resources Conservation Service Office, MSU-Extension County Office or from any Michigan Department of Natural Resources Forest Management Division Cooperative Forest Management Program Forester.

Alternative Weed Control Methods

	PRO'S	CON'S
1) Mechanical*		
a. Hand Scalping	-low cost, -best suited for steep areas	-labor intensive -weed control often inadequate -requires follow-up weed control
b. Furrowing with plow	-moderately low cost -good weed control first year	-may cause erosion on sloping ground -furrows will remain for years -requires follow-up weed control
c. Mechanical Tree Planter	-quick -consistent -good weed control first year	-not practical on excessive slopes -requires follow-up weed control
d. Tillage (plowing, disking, etc.)	-smooths the ground -reduced hand labor	-Plants'weed seeds on soil surface -may create erosion on sloping ground -may increase growth of perennial grasses
e. Fabric weed barriers	-one time'weed control that is effective	-high cost -labor intensive
2) Chemical		
	-effective control at low cost	-multiple applications often needed -Applicator's permit may be needed
3) Mulching		
	-moderately low cost -effective control	-labor intensive and high maintenance -may create nutrient deficiency due to high carbon/nitrogen ratio

**Note: Mowing is not considered an effective weed control method. Mowing does not control root competition for water and nutrients and may increase competition by grass*

Design Criteria: Tree or Shrub Establishment

Date: ____/____/____

Assisted by: _____

1) Project Identification and Location

Client Name: _____

Township: _____

County: _____

State: _____

Farm Number: _____

Tract Number: _____

Field / Stand Number: _____

Watershed _____

2) Purpose(s) of Planting: *(Select Appropriate Ones)*

- Tree/Shrub Establishment (612)*
- Windbreaks and Shelterbelts (380)
- Windbreak and Shelterbelt Renovation (650)
- Upland Wildlife Habitat Management (654)
- Riparian Forest Buffer (391)
- Critical Area Planting (342)
- Filter Strip (393)
- Hedgerow Planting (422)
- Streambank and Shoreline Protection (580)
- Field Border (386)

* refers to NRCS practice standard (Sec. IV NRCS Field Office Technical Guide)

3) Site Information:

<i>Field/Stand</i>	<i>Predominant Soil Type(s)</i>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

4) Woodland, Windbreak, Wildlife

Habitat Suitability *(See Soil Interpretation Record (Soils - 5))*

<i>Row Number (s)</i>	<i>Species to Plant</i>	<i>Spacing: (ft.)</i>	
		<i>In Rows</i>	<i>Between Rows</i>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

5) Site Preparation and Weed Control Recommendations:

Mechanical Weed Control: (check applicable)

<i>field/stand number(s):</i>	<i>method:</i>
_____	Hand Scalping (min. 24'Diam.)
_____	Mechanical Planter w/Scalper
_____	Tilled (strip or whole field-circle one)
_____	Plowed Furrow (min. 12'wide x max. 6'deep)
_____	Fabric Weed Barrier (min. 24x 24" with 4 staples)

Chemical Weed Control :

<i>field/stand year:(s)</i>	<i>herbicide:</i>	<i>treatment:*</i>	<i>rate:</i>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

*field(f), strip(st), spot(sp)

Mulch Weed Control:

<i>field/stand thickness:</i>	<i>type:</i>	<i>rate:</i>
		<i>(in.)</i>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

6) Considerations for Design and Layout

North and South orientation of rows may maximize individual plant development. Mechanical planting and site preparation should be done across the slope or on the contour where slopes exceed 5%. Use transplants when possible (2-1 or larger) for windbreak establishment and renovation.

7) Maintenance

Weed control will be needed for a minimum of 3 years after planting if competition is severe. Deer and/or rodent protectors should be used when planting hardwoods or shrubs where wildlife damage could occur. Scout plantings regularly for insect, weed and disease problems. Follow label closely when applying pesticides.

Additional information about the design and function of may be obtained from the world wide web: (<http://www.mi.nrcs.usda.gov>). Also see the USDA-NRCS Field Office Technical Guide.

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Reference/File Indexes:		
Topic Application:	Resource Series:	References:
<input type="checkbox"/> Construction	<input type="checkbox"/> Agronomy	USDA-NRCS National Forestry Manual
<input checked="" type="checkbox"/> Design	<input type="checkbox"/> Biology	USDA-NRCS-FOTG
<input type="checkbox"/> Fact	<input type="checkbox"/> Engineering	USDA NRCS (MI) Conservation Practice Associations:
<input type="checkbox"/> Information	<input checked="" type="checkbox"/> Forestry	(612) Tree and Shrub Establishment
<input type="checkbox"/> Management	<input type="checkbox"/> Hayland	(380) Windbreak/Shelterbelt Establishment
<input type="checkbox"/> _____	<input type="checkbox"/> Livestock	USDA NRCS (MI) Standards & Specification Associations:
<input type="checkbox"/> _____	<input type="checkbox"/> Pastureland	N/A
FOCS (MI) Reference Number: F-1	<input type="checkbox"/> Recreation	USDA NRCS (MI) Associated Conservation Sheets:
	<input type="checkbox"/> _____	-

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