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Shelterbelts and Windbreaks: Getting Rid of the Grass

Cooperative Extension South Dakota State University

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Shelterbelts and windbreaks:

Getting rid of the grass



Cooperative Extension Service
South Dakota State University
U.S. Department of Agriculture

Five common situations trigger decline of shelterbelts/windbreaks. They are:

- grass growing in the planting
- a poor or nonexistent shrub row
- trees in poor vigor
- livestock in the planting
- holes or gaps in the rows.

FS 751

Problem:

The S/W with weeds and grass growing inside

Getting rid of the grass



Larry Helwig
Extension forester

If, in average snowfall years, snow drifts into your farm yard, inspect your shelterbelt/windbreak (S/W) next summer when the leaves are out.

Walk out to the north and west about 500 feet. Your S/W should appear solid, like a wall. If you can see through it, it has "holes" or weak spots that in winter are allowing the wind and snow through to build up snowdrifts. A properly functioning S/W holds the snow within and/or near the planting.

In the summer, these same "holes" allow sunlight to come through the tree crowns to the ground surface, encouraging unwanted grass and weed cover.

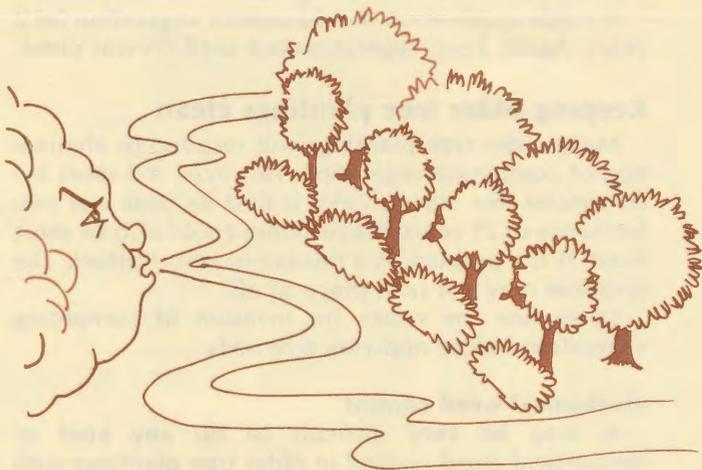
Although it may look attractive, this ground cover robs the trees and shrubs in the S/W of moisture, often to a surprising extent.

Renovating the grassed-in S/W

A common cause of weakened tree plantings is other vegetation growing within and adjacent to the S/W.

This vegetation competes for moisture with the trees, and grass is the worst competitor. A small amount of grass becomes sod in a few years. As the grass thickens, the trees' crown density decreases. You no longer have an effective windbreak.

In some instances, successive years of drought or attacks by defoliating insects like elm leaf beetle will decrease crown density and allow sunlight to reach the ground surface beneath the trees.



A good S/W will act as a wall to the wind. A poor one will have "holes" in it, allowing the wind to drive through. Plug up the holes.

You have to determine the cause of the S/W problem, whether it be insects, drought, age, or something else, and correct it if possible. In the meantime, that grass cover must be eliminated if you want a shelterbelt that shelters.

Cleaning up younger tree plantings

The same care applies to young plantings.

Too often, weed control measures are stopped too soon in new plantings. Weed control should be carried on until the crowns close and shade the ground.

This requires cultivation until the side branches become a nuisance. After cultivation is no longer possible, a single application of preemergence chemical should keep weeds and grass down until the crowns close.

Mechanical weed control

Competing vegetation in tree plantings can be controlled for several years with cultivation equipment. Initially, a tandem (not single) disc or any other type that cuts and mixes will do a suitable job. Thereafter, a shovel cultivator will do a better job.

Keep the vegetation out until crown closure is achieved.

Chemical weed control

When tough-to-kill perennials are present, it will be necessary to use a foliage systemic herbicide. If a perennial grass is the vegetation, use a selective chemical like Dalapon. If both grasses and weeds are a problem, use a non-selective chemical like Glyphosate.

Follow up the initial kill with an application of a preemergence chemical like Simazine or Casoron. Preemergence herbicides should be applied after October 15 for best results.

If weeds are the annual easy-to-kill kind, a single application of a preemergence chemical will suffice. Use the granular form when existing vegetation will intercept the spray of a wettable powder. The spray form can be used when the ground surface is clean.

A single application should control vegetation for 2 years. Again, keep vegetation out until crowns close.

Keeping older tree plantings clean

Many older tree plantings will respond to elimination of competing vegetation. However, if a short lived species like Siberian elm is past its peak age performance of 25 years, the response could also be short lived. If the problem is a disease or insect attack, the response may not take place at all.

Determine the cause for invasion of competing vegetation before applying a remedy.

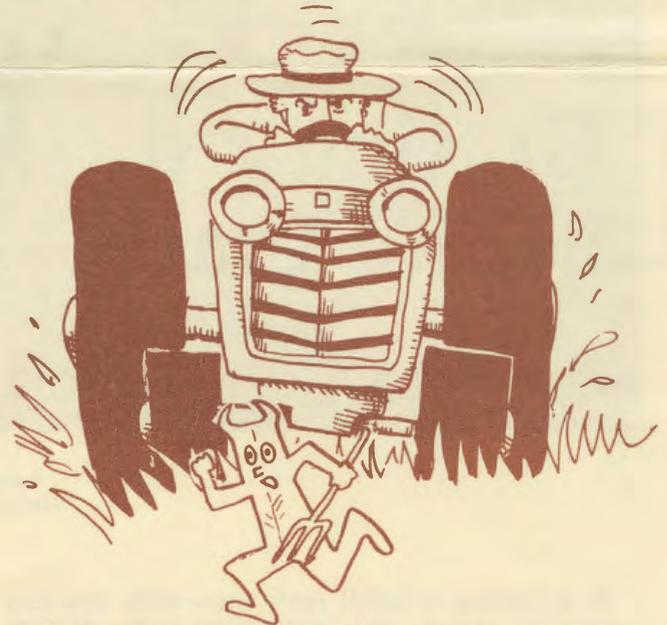
Mechanical weed control

It may be very difficult to do any kind of mechanical weed control in older tree plantings with regular farm machinery. Space may not allow it.

A small tractor or a garden type tractor is an alternative. The cultivator should be one that has a



Situation: The S/W, either young or mid aged, is grassed in. Many South Dakota plantings are in this shape. It needs to be corrected.



Remedies. A small tractor or even the small, high powered garden tractor may be the only way to work up the ground. Cultivate only deeply enough to get rid of the ground vegetation. Otherwise, the tree surface roots will be damaged.



Soon the tree crowns will limit space, and it will be too hard to get in with equipment. Become familiar with the preemergence chemicals. One application should give weed control for 2 years.

shallow cutting and mixing action like a tandem disc or rototiller. Avoid cultivating deeper than 3 inches.

Chemical weed control

Very often, chemical weed control may be the only way to treat competing vegetation in old, crowded tree plantings. Hard-to-kill perennials need to be removed with a systemic herbicide like Glyphosate during the growing season. **Keep this chemical off the trees.**

The following fall (after October 15) apply a long lasting preemergence herbicide like Simazine or Casoron.

Keeping watch on the S/W in following years

Usually a tree planting will respond when vegetation is removed. However, keep a watch on the planting. If the crowns do not thicken or respond to the treatment, something else may be causing the S/W decline. It may be necessary to secure the assistance of a professional such as a county agent, a forester, or district conservationist or manager.

Fact Sheets discussing shelterbelt/windbreak problems and renovation procedures are:

FS 746, Stop livestock grazing in shelterbelts

FS 749, Plugging up the holes (trees)

FS 750, Fixing shrub rows

FS 751, Getting rid of the grass

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Replacement plants

Trees and shrubs for moist to wet soils:

Shrubs	Trees
1. Dogwood	1. Willows
2. Elder	2. Poplars
3. European Cranberry	3. Basswood

Trees and shrubs for shady locations:

Shrubs	Trees
1. Chokecherry	1. Basswood
2. Currant	2. Larch
3. Dogwood	
4. Nannyberry	
5. Honeysuckle	
6. Ninebark	
7. Serviceberry	

Trees and shrubs for dry or sandy soils:

Shrubs	Trees
1. Sandcherry	1. Green ash
2. Lilac	2. Honeylocust
3. Plum	3. Siberian elm
4. Buffaloberry	4. Russian olive
5. Caragana	5. Hawthorn
6. Serviceberry	6. Amur maple
	7. Bur oak
	8. Hackberry

Cooperative Extension Service
U.S. Department of Agriculture
South Dakota State University
Brookings, South Dakota 57007

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