United States Department of Agriculture

NRCS Natural Resources Conservation Service

CRP Practice 5A

Indiana - July 2012 (ver. 1.1)

FIELD WINDBREAK PROGRAM JOB SHEET

POLICY

To be eligible for the Conservation Reserve Program (CRP), the acreage offered must be cropland that meets eligibility requirements as determined by the Farm Service Agency (FSA).

Field windbreaks will be installed according to the Windbreak/Shelterbelt Establishment Standard (380) in the local Natural Resources Conservation Service (NRCS) Field Office Technical Guide (FOTG). For CRP the windbreak design is the minimum needed to reduce cropland erosion, according to the FOTG, regardless of the purpose of the windbreak.

DESIGN

The following planting designs are eligible for CRP:

- A one row windbreak using a dense conifer of Spruce or Cedar.
- A Twin Row high density windbreak.
- A three row windbreak consisting of at least; one shrub row and one deciduous tree species row. The second row will consist of small or hardwood deciduous tree species. The third row will consist of a conifer tree row or a deciduous hardwood tree row, but not small deciduous species.

Plant trees and shrubs a minimum of eight feet from property lines, crop fields, and fences or the distance of the mature plant drip line whichever is greater. Do not plant woody vegetation that will interfere with fences, utilities, roads, legal drains or other easement areas.

Plant Spacing

Within rows:

Shrubs;	3 - 8 feet apart
Narrow crowned trees (Cedar and other columnar species);	6 - 10 feet apart
Normal crowned trees;	12 - 16 feet apart

Between rows:

Between shrub rows;	6 - 8 feet
Between tree rows;	12 - 16 feet
Between tree/shrub rows;	8 - 16 feet
Twin-Row high density;	4 - 12 feet

Average contract width:

One row windbreak:	16 feet
Twin-Row high density:	28 feet
Three row windbreak	48 feet

NRCS must document the need for a wider windbreak with approval from the NRCS State Forester.

SPECIES SELECTION

Select species that will accomplish the intended purpose and that are adapted to the soils, climate, and site conditions. See Table 1 for common windbreak species for Indiana. For additional species consult the NRCS Soil Data Mart (Windbreaks and Environmental Plantings report) at http://soildatamart.nrcs.usda.gov/

WEED CONTROL

To ensure successful establishment of trees and shrubs it is important to have a weed free planting site. Site preparation may be needed to eliminate weeds using tillage and /or herbicides. Contact a professional forester, Purdue University Extension Service or licensed pesticide applicator for specific herbicide recommendations.

Herbicides to control weeds should be applied when trees or shrubs are planted. Weed control after planting is important to ensure survival and maximum growth of trees and shrubs. CRP cost share is authorized for one weed control application within 24 months after planting a windbreak.

Weed control using herbicides when applied should maintain a weed free, three foot radius circle or strip around each plant to maximize tree growth. All herbicides shall be applied according to label directions.

PLANTING

To assure proper alignment of rows and spacing, the windbreak will be staked or laid out prior to planting. Windbreaks with two or more rows will be stagger planted.

Bare rooted stock (seedlings) should be planted in the spring after the ground thaws, but no later than June 1; or planted in the fall using dormant seedlings (usually after November 1). Container stock may be planted between September 15 - June 1 as local soil moisture and weather conditions permit.

All planting stock shall not be planted when the soil is frozen or dry and will be planted with the root collars approximately at or slightly below the ground line.

Planting stock will be protected from desiccation prior to and during planting. Planting stock should be planted immediately upon delivery to the site. If planting is delayed stock will be stored in accordance with NRCS Practice FOTG (612) Tree/Shrub Establishment.

OPERATION AND MAINTENANCE

After the windbreak is established, maintenance including mowing is only allowed on a spot basis and only if necessary to maintain stand health, maintain stand diversity, or control pests that will damage the CRP cover or adjacent lands. After establishment maintenance is not allowed between April 1 and August 1 (the Primary Nesting season). If maintenance activities are needed during these times, the FSA County Committee must approve the maintenance activity prior to the activity occurring. Mowing is not recommended for weed control for windbreaks because of the potential damage to trees and shrubs from mowing equipment.

Livestock will be excluded without cost-share for all CRP windbreaks. Noxious weeds and other undesirable plants, insects, and pests need to be controlled to insure that the windbreak is established. Herbicides using labeled rates can be used to control weeds and unwanted vegetation.

Field windbreaks should be inspected on a seasonal basis and following major storm and runoff events. Any damages or sediment accumulation that would adversely impair the function of the windbreak must be corrected immediately, at the landowner's expense.

The landowner will replace dead trees and shrubs as needed to ensure that at least 90% of all planted trees and shrubs are living, and that two consecutive plants are not missing within a row. The landowner is responsible for all costs associated with planting stock to replace dead plants.

Trees should be pruned to maintain central stems and eliminate forks and multiple leaders.

Table 1. Common Windbreak Species

Species	Soil Drainage[1]	20 Year Ht. Ave. (feet)[2]
Conifer Species		
Baldcypress[3]	VPD-WD	>35
White Pine	MWD-WD	>35
Virginia Pine[4]	MWD-ED	16-25
Dense Conifer Species		
Eastern Red Cedar	SPD-ED	16-25
Northern White Cedar[5]	PD-WD	16-25
Norway Spruce	SPD-WD	26-35
Deciduous Hardwood Tree Species		
Black Gum	PD-WD	26-35
Black Oak	MWD-ED	26-35
Bur Oak	PD-ED	26-35
Pin Oak	VPD-WD	>35
River Birch[6]	VPD-WD	>35
Red Oak	MWD-WD	26-35
Shumard Oak	SPD-WD	26-35
Sycamore	PD-WD	>35
Silver Maple	VPD-WD	>35
Swamp White Oak	VPD-WD	26-35
Tulip Tree	MWD-WD	>35
White Oak	MWD-WD	26-35
Small Deciduous Tree Species		
America Plum	MWD-ED	16-25
Washington Hawthorn	SPD-ED	16-25
Shrub Species		
Black Chokeberry	SPD-WD	<8
Blackhaw	MWD-WD	8-15
Buttonbush	VPD-WD	<8
Elderberry	VPD-WD	<8
Flowering Dogwood	MWD-WD	8-15
Gray Dogwood	SPD-WD	<8
Silky Dogwood	VPD-WD	<8
Hazelnut	MWD-WD	8-15
Highbush Cranberry	VPD-WD	<8
Ninebark	VPD-WD	<8
Redbud	MWD-WD	8-15
Smooth Sumac	MWD-ED	8-15

[1] VPD=very poorly drained, PD=poorly drained, SPD=somewhat poorly drained, MWD=moderately well drained, WD=well drained, ED=excessively drained
[2] On sites where the species are well adapted
[3] Recommended in Central and Southern Indiana as documented in FOTG Sect. II Windbreaks
[4] Recommended in Southern Indiana as documented in FOTG Sect. II Windbreaks
[5] Recommended in Northern and Central Indiana as documented in FOTG Sect. II Windbreaks. [6]Susceptible to ice damage.

FIELD WINDBREAK DESIGN WORKSHEET CRP CP- 5A

Name:_____ County:_____ Date: _____
Farm No._____ Tract No._____ Field Numbers:_____
Assisted By: Concurred By:

REQUIREMENTS FOR WINDBREAK #

Design Width (W) =			Design Length (L) =	
20 Year Height (H) of the Tallest Species:				
Sheltered Distance = H X 10:				
Predominant Soil Type(s):				
Planned Species *Shrubs should be planted on the outside row		Total Needed	Planned Spacing (ft)	
Row 1			Within Row 1	
			Between Rows 1 & 2:	
Row 2			Within Row 2:	
			Between Rows 2 & 3	
Row 3			Within Row 3:	
Total Plants Needed				

Site Preparation Before Planting	
Tillage Methods:	Dates:
Herbicide$_1$ (per label):	Dates:
Herbicide$_2$ (per label):	Dates:
Alsike Clover (if desired): 2 lbs./acre	Dates:
Other:	

Planting Methods	
Tree Planting Method:	Dates:
Herbicide$_1$ (per label):	Dates:
Herbicide$_2$ (per label):	Dates:
Other:	

Post Planting Maintenance and Weed Control	
Herbicide$_1$ (per label):	Dates:
Herbicide$_2$ (per label):	Dates:
Other (corrective pruning, replacement of dead trees etc.):	
Maintain a three foot weed free radius around each plant for optimal growth.	

Mid-Contract Management
The predominant cover will be trees so Mid-Contract Management is not required.