



# CRP Practice CP16A Shelterbelt Establishment

Natural Resources Conservation Service Indiana - March 2016 (ver. 1.0)

## Shelterbelt Establishment



Shelterbelts are established to protect or shelter farmsteads or livestock areas from troublesome winds and snow deposition. These plantings also are designed to save energy, provide wildlife habitat, enhance aesthetics, and increase carbon storage. Also, when used as a living screen, shelterbelts control views, reduce noise, and intercept chemical drift.

### CRP 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).

Shelterbelts will be installed according to the Windbreak/Shelterbelt Establishment Standard (380) in the local Natural Resources Conservation Service (NRCS) Field Office. **CRP policy allows a shelterbelt to be applied up to a maximum width of up to 2 times the design standard from the local NRCS FOTG for protecting farmsteads or livestock areas.**

#### Minimum Design:

*Normal Design:* a three row shelterbelt consisting of at least two tree rows which contains at least one evergreen conifer row.

*Alternative design* (in cases of severe space limitation): A twin-row high density design.

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. Shelterbelts shall be designed to prevent snow drifting and ice hazards. When shrub rows are planned they should be planted as outside rows of the shelterbelt.

For wind protection the ideal shelterbelt location is a distance of 2-5H (H is the design height of the tallest tree row at 20 years) from the farmstead or location needing protection.

**Table. 1 Plant Spacing**

Within Rows	Spacing (ft.)
Shrubs	3-8
Narrow Crowned Trees (Cedar and columnar varieties)	6-10
Normal Crowned Trees	12-16
Between Rows	Spacing (ft.)
Shrub Rows	6-8
Tree Rows	12-16
Tree/Shrub Rows	8-16
Twin Row High Density	4-12

### PLANTING

Site-specific requirements are listed on the attached Specifications Sheet. Any changes to these specifications should be approved by NRCS.

All acreage must be planted within 12 months of contract approval to remain in compliance. If circumstances beyond the landowner's control prohibit the planting within the first 12 months, the local FSA County Committee may approve an extension to the next planting season.

It is very important to plant the vegetation into a weed-free seedbed. Weed control efforts should begin prior to planting, and may require multiple applications in both the fall and spring prior to planting. Use herbicides or tillage (however do not use spring tillage for tree planting) to eliminate competing vegetation. If necessary for erosion control, seed a temporary cover. Eliminate the temporary vegetation at planting time with tillage or herbicides.

Bare rooted stock (seedlings) 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. Bare rooted stock shall be planted in the spring after the ground thaws, but no later than June 1.

**Weed Control During Establishment Period:** For information on herbicide controls, contact a local consultant or Purdue Extension Specialist. Always apply herbicides according to labeled directions.

**Weed Control After Establishment Period:** Weed control is also important to ensure survival and maximum growth of the trees after they are planted. Nine (9) ft<sup>2</sup> around each tree should remain weed-free to maximize tree growth. Mowing is not recommended for weed control for trees.

CRP cost share is authorized for one weed control application within 24 months after planting a shelterbelt.

## OPERATION AND MAINTENANCE

Noxious weeds and other undesirable plants, insects, and pests shall be controlled, including such maintenance as necessary to avoid detrimental effects to the surrounding land.

**After** the Final Status Review or 3 years (whichever comes first), maintain the planting according to your CRP conservation plan. Maintenance activities are allowed only 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. MOWING and other maintenance activities are not allowed between April 1 to August 1 to protect ground-nesting wildlife (i.e. - the Primary Nesting and Brood-Rearing season). If maintenance activities are needed during these times, the FSA County Committee **must** approve the maintenance activity **prior to** the activity occurring.

### Mowing for generic weed control or for cosmetic purposes is prohibited.

Exclude all acres from haying and grazing year round, unless authorized. Fences may need to be constructed and maintained to exclude livestock throughout the entire year.

The contract area cannot be used for field roads or other uses that will damage or destroy the cover. Shelterbelts 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 shelterbelt must be corrected immediately, at the landowner's expense.

The landowner will replace dead trees and shrubs as needed to insure that the shelterbelt functions as intended. The landowner is responsible for replacing dead plants (cost share may be available if approved by FSA). In addition, trees should be pruned to

maintain central stems and eliminate forks and multiple leaders.

**Table 1. Common Shelterbelt Species**

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

<sup>1</sup> VPD=very poorly drained, PD=poorly drained, SPD=somewhat poorly drained, MWD=moderately well drained, WD=well drained, ED=excessively drained

<sup>2</sup> On sites where the species are well adapted

<sup>3</sup> Recommended in Central and Southern Indiana as documented in eFOTG Sect. II Windbreaks

<sup>4</sup> Recommended in Southern Indiana as documented in eFOTG Sect. II Windbreaks

<sup>5</sup> Recommended in Northern and Central Indiana as documented in eFOTG Sect. II Windbreaks

## MID-CONTRACT MANAGEMENT

Mid-Contract Management (MCM) is required on this practice. The entire acreage can be managed in a single year. For maximum habitat value, disturb no more than 1/3 of the contract acreage in any given year.

MCM activities will be avoided on environmentally sensitive areas including:

- a) Concentrated flow areas,
- b) Critical areas,
- c) Within the first 20 feet of a practice that borders a water resource to avoid water quality resource concerns, and
- d) Other areas where gully erosion is likely.

Environmentally sensitive areas will be marked on the plan map to ensure Mid-Contract Management activities are avoided on these areas.

Areas devoted to trees have the following options:

- Inner Seedling Planting (re-enrollments)
- Inter-seeding forbs/legumes/pollinator habitat
- Follow-up Weed Control
- Pruning
- Thinning (re-enrollments)

MCM activities operations will not be performed from April 1 through August 1 for contracts starting in 2008, to protect the primary nesting period for grassland bird species. It is also recommended, but is not required, to delay MCM activities until after August 15 to reduce the chance of harming fledgling birds and other young wildlife.

CP16A SPECIFICATIONS SHEET							
<b>Landowner:</b>				<b>County:</b>			
<b>Farm:</b>		<b>Tract:</b>		<b>Field(s):</b>		<b>Acres:</b>	
						<b>Date:</b>	

### Planting Plan(s)

Shelterbelt (Site ID or Description <sup>1</sup> )					
<b>Soil Type(s)</b>					
<b>Length</b>					
<b>Width</b>					
	Species	Total Needed	Plant 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	Between Rows 3&4	
Row 4			Within Row 4	Between Rows 4&5	
Row 5			Within Row 5	Between Rows 5&6	
Row 6			Within Row 6		
Total Trees/Shrubs Needed by Species					
Species	Number	Species	Number	Species	Number

Shelterbelt (Site ID or Description <sup>1</sup> )					
Soil Type(s)					
Length					
Width					
	Species	Total Needed	Plant 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		
			Between Rows 3&4		
Row 4			Within Row 4		
			Between Rows 4&5		
Row 5			Within Row 5		
			Between Rows 5&6		
Row 6			Within Row 6		
<b>Total Trees/Shrubs Needed by Species</b>					
Species	Number	Species	Number	Species	Number

<sup>1</sup> Indicate on plan map

<b>Before Planting</b>	
<input type="checkbox"/> Tillage Methods:	Dates:
<input type="checkbox"/> Herbicide <sub>1</sub> (per label):	Dates:
<input type="checkbox"/> Herbicide <sub>2</sub> (per label):	Dates:
<input type="checkbox"/> Alsike Clover (if desired): 2 lbs./acre	Dates:
<input type="checkbox"/> Other:	
<b>Planting Method in Year _____</b>	
<input type="checkbox"/> Tree Planting Method:	Dates:
<input type="checkbox"/> Herbicide <sub>1</sub> (per label):	Dates:
<input type="checkbox"/> Herbicide <sub>2</sub> (per label):	Dates:
<input type="checkbox"/> Other:	
<b>Post Planting Maintenance and Weed Control</b>	
<input type="checkbox"/> Maintain a 3-ft. weed & grass-free radius for up to 3 years around each tree for optimal growth	
<input type="checkbox"/> Herbicide <sub>1</sub> (per label):	Dates:
<input type="checkbox"/> Herbicide <sub>2</sub> (per label):	Dates:
<input type="checkbox"/> Other (corrective pruning, replacement of dead trees etc.):	
NOTE: <u>after</u> the Final Status Review has been issued, all maintenance activities will not occur between April 1 to August 1, and will occur on a "spot" basis <u>only</u> , unless prior approval is granted by the County Committee.	
<b>MID-CONTRACT MANAGEMENT - STARTING IN YEAR:</b>	
<input type="checkbox"/> see the attached Mid Contract Management Job Sheet for details	
For CRP Mid-contract Management job sheets see: <a href="http://www.in.nrcs.usda.gov/programs/CRP/crphomepage.html">http://www.in.nrcs.usda.gov/programs/CRP/crphomepage.html</a>	