



**Tree and Shrub Establishment for Wildlife Habitat**  
 (612)  
 Biology Jobsheet #10

**Natural Resources Conservation Service (NRCS) - Minnesota**

**Landowner** \_\_\_\_\_

**Definition**

Wildlife tree/shrub planting is establishing and maintaining tree and shrub cover to protect soil and water resources on land retired from agricultural production and provide for wildlife benefits and provide protection from wind and manage snow deposition.



**Purpose**

Tree/shrub planting is used to protect soil resources, control snow deposition, prevent wind damage to farmsteads, provide shelter for livestock, conserve heating and cooling energy, beautify the area, or improve an area for wildlife.

**Wildlife**

This practice is well suited to provide quality wildlife habitat. Tree species selected for planting will affect what type of wildlife that will benefit from these acres. Supplementing the tree plantings with other wildlife practices, plantings or seeding will further enhance the cover.



**Planning Considerations**

Planting trees and shrubs has the potential of adversely affecting non-target species. Careful consideration is to be given when planting trees and shrubs in the historic prairie region of the state. Refer to practice standard 612- Tree/Shrub Planting native trees and shrubs recommended by ecoregion.

- Establish dense tree and shrub block, clump or under-plantings as appropriate.
- Optimal plantings are 2-5 acres in size, 10-16 rows (150-200' total width), and have a minimum 4 rows of conifers planted on the down wind side.
- A standard 10 row block planting will consist of 2 rows of shrubs planted on the windward side of the planting. Preferably the shrubs will be planted 30-50' feet upwind of the rest of the planting to serve as a snow catch. The next 4 rows will consist of tall deciduous trees, and the inner 4 rows will consist of conifers. If space is available, expand the 10 row planting as follows:

ADDITIONAL ROWS	TREE / SHRUB
1,2	Conifer
3-5	2 Conifers, 1-3 Shrubs
6	2 Conifers, 1 Medium tree, 3 Shrubs

**Spacing Between Rows:**

Row Types/Heights	Minimum Row-to-Row Spacing
Between shrubs less than 10' in height	10 ft.
Between shrubs and small trees from 10' to 25' in height	12 ft.
Between small trees less than 25' in height	12 ft.
Between small and tall trees greater than 25' in height	16 ft.
Between tall trees greater than 25' in height	16 ft.
Between any wide crowned species and conifers	20 ft.
Between faster growing species and conifers	20 ft.

### Spacing within-row:

Tree/ Shrub Group	Spacing Ft.
Shrubs	3 - 8
Small Trees	8 - 16
Tall Trees	8 - 20
Conifers - Cedars	6 - 10
Conifers – All Others	8 - 16

**Between row seeding:** mixtures shall be selected from one of the following:

Recommended Species	Drilled PLS lb/ac	Broadcast PLS lb/ac
Perennial Ryegrass	8.0	12.0
Blue Grama <sup>1/</sup>	2.5	3.5
Sideoats Grama <sup>1/</sup>	7.5	11.5

<sup>1/</sup> May be seeded together as a 50:50 mix, each at half the full seeding rate.

- Woodland restoration that is intended to restore, as closely as possible natural community conditions may also be planted.
- Plantings are most effective when located adjacent to a winter food source (cropland stubble, food plot etc.), preferably the north and west sides

### Specifications

Planting plans and planting activities will be consistent with NRCS requirements. NRCS has technical responsibility for plan development and practice certification. Additional provisions may be entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide practice standard 612 – Tree/Shrub Planting.

### Management Considerations

On fields with a high potential for erosion, additional efforts may be required to minimize erosion until tree cover establishment. Practices such as cover crops, contour planting, etc. should be considered in the planning process for inclusion into the plan.

Noxious and highly competitive weeds may require control to allow establishment of the planting. Mechanical or chemical control methods used must be consistent with erosion control requirements and pesticide label requirements.

### Nutrients

Nutrients are not required for tree planting. However, if management goals provide that there are going to be openings in the tree stand established to herbaceous material some fertilizer or lime may be needed in those areas.

### Use of Pesticides

Only those pesticides which are labeled for the specific use will be recommended. University and Extension publications and specific label instructions will be used for guidance on herbicide selection and use.

### Operation and Maintenance

Operation and maintenance will include but not be limited to the following:

1. Prevent animal damage and browse by rodents, mice, rabbits, deer, gophers and other wildlife which adversely affect woody vegetative cover.
2. Prevent disturbance of cover during the primary nesting season for wildlife (May 1 - Aug 1).
3. Control all noxious weeds as identified by state and local laws, by: a) treating with chemicals per label directions, or b) spot mow before seed heads form. When possible delay use of control measures until after Aug 1st to protect wildlife.
4. Protect the areas from haying and grazing. Fences may need to be constructed and maintained to exclude livestock throughout all 12 months of each year.
5. Replace dead trees and shrubs as necessary, and control undesirable vegetative competition to promote a fully functional tree planting. Control weed and grass competition around trees and shrubs for a minimum of 2 to 4 feet using cultivation, mulch, or chemical control measures. Mechanical cultivation needs to be kept shallow to avoid damaging root systems.
6. Periodically inspect for gulying, and concentrated flow erosion. Repair disturbed areas and re-vegetate areas to permanent cover.
7. Avoid direct spray applications and spray drift when applying herbicides on adjacent cropland.
8. Control insects and diseases damaging the vegetation. If you use pesticide to treat a problem read and follow label directions.
9. Do not use the planted area for field roads, turn areas, or other uses that will damage or destroy the vegetation.
10. Prune trees, as necessary, to remove dead or damaged branches, maintain a single leader and upright form.
11. Under dry conditions consider supplemental watering. Young seedlings require extra water until roots fully develop. When you water give each tree 5-15 gallons of water.



## Practice Specifications Approval and Completion Certification

**LANDOWNER/OPERATOR ACKNOWLEDGES:**

- a. They have received a copy of the specifications and understand the contents including the scope and location of the practice.
- b. They have obtained all necessary permits and/or rights in advance of practice application, and will comply with all ordinances and laws pertaining to the application of this practice.
- c. No changes will be made in the installation of the job without prior concurrence of the NRCS.
- d. Maintenance of the installed work is necessary for proper performance during the life of the practice. The practice life is \_\_\_\_\_.

**I have reviewed all specifications and agree to install as specified:**

Landowner/operator name and title (type or print):		
Landowner/operator Signature:		Date:
Landowner/operator name and title (type or print):		
Landowner/operator Signature:		Date:

***NRCS Review Only***

**DESIGN INSTALLATION AND LAYOUT APPROVAL:**

Designed By:	Date:	Job Approval Authority (JAA):
Approved By:	Date:	Job Approval Authority (JAA):

**RECORD OF COMPLETION AND CHECK OUT CERTIFICATION:**

Treated Acres:	Date Completed by Client:	Date Certified:

**Certification Statement:**

I certify that implementation of this conservation practice is complete, meets criteria for the stated purpose(s), and meets the NRCS conservation practice standard and specifications.

NRCS Signature:	Date:	Job Approval Authority (JAA):