



Tree and Shrub Establishment

Conservation Practice Job Sheet

(JS-MO612)

Missouri - Natural Resources Conservation Service December 2013

Landowner/Producer:	Farm #:
Field(s):	Tract #:
Soil Map Unit(s):	County:
Planner:	Date:

Definition

Establishing woody plants by planting seedlings, cuttings, or container/potted plants. (Not for direct seeding or natural regeneration.)

Purposes (check all that apply)

- Establish woody plants for forest products
- Establish wood plants for wildlife habitat
- Long-term erosion control
- Improvement of water quality
- Treat waste
- Reduction of air pollution
- Storing carbon in biomass
- Reduce energy use
- Develop renewable energy sources
- Improve or restore natural diversity
- Control snow deposition
- Enhance aesthetics
- Control airborne chemical drift and odor movement

Condition where practice applies

On any appropriately prepared site where woody plants can be grown.

Specifications

Site Preparation

The planting site shall be prepared in a manner that will make planting easier, maximize seedling survivability and provide a good starting point for long-term landowner objectives. Any vegetation that would hinder planting or provide excessive competition to the seedlings should be controlled or removed with band, strip, or spot treatment. Vegetation between planted tree rows may be necessary for erosion control purposes.



Site preparation is planned as follows (check all that apply):

- Mechanical means such as plowing, disking or rototilling
- Chemical control of vegetation
- Hand scalping the area where trees are to be planted
- Prescribed burning based on a current approved prescribed burn plan
- Mowing (typically used in combination with other methods)
- Other:

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Site Preparation - Continued:

If a *cover crop* is needed, use the following species at the indicated rates:

Field	Temporary/Permanent	Species	Rate – PLS/ac

If *chemical weed control* is needed, use the following products at label rates:

Field	Herbicide	Treatment: field/strip/spot

Existing brush or trees may be maintained if the site is to be inter-planted and the retained trees/shrubs will provide functions consistent with the planned use. For wildlife purposes, consider retaining some trees that will provide den sites or mast production while the new planting is becoming established. Undesirable trees that will hamper planting or provide excessive shade should be removed or killed.

The following trees and shrubs will be maintained for inter-planted areas:

Field	Species	Species

Prior to planting, adequate protection from fire and livestock should be established.

Planting Dates

Container-grown plants may be planted any time that soil conditions are suitable, as long as proper watering and weed control procedures are followed. Bare-rooted stock and cuttings shall be planted according to the following schedule:

- March 1 - June 1.*
 - February 15 - May 15.*
 - December 1 - May 1.*
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Location and Layout (See Map)

Field(s)	Acres to be Planted	Comments



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Operation and Maintenance: Care after Planting

Watering: Typically, large plantings are not watered. However, specialized or smaller plantings such as windbreaks may be watered to increase survival and growth. If trees are watered, the water should be applied gradually through sprinklers, soaker hoses, drip buckets or other means. Watering should be continued throughout summer anytime conditions are dry. Consider using 2-4 inches of mulch on larger container trees to maintain soil moisture and modify soil temperature. Weed control fabric will also help maintain soil moisture, but should be covered with mulch to modify soil temperatures.

Weed Control: Elimination of competing vegetation is normally carried out for one to five years after planting. Weed control is an important factor in tree and shrub seedling survival, especially for hardwood species. Weed control will be accomplished through **mulching**, **cultivation**, or **herbicide** usage. In all cases, the vegetation should be controlled in a band 12 to 18 inches along each side of the tree row or in a 2 to 3 foot diameter circle around each tree. Weed **fabric barriers** may be used for specialized plantings for extended weed control after all existing vegetation is eliminated.

Mechanical or hand cultivation should be kept at least 6 inches from the seedling and no deeper than 3 inches to avoid damage to the seedling. Additional methods may be needed to control weeds closer to the seedling. Mulching or fabric barriers provide good control but may be impractical on large plantings. The use of herbicides usually provides good weed control. Mowing generally does not provide adequate control since the weeds are still competing for nutrients and water; also potential damage to seedlings from mowing is high. Mowing between rows can be used to help maintain row locations for the use of other weed control methods.

Pest Management: Plant injury or death should be controlled through preventative measures. Domestic animals that might graze on seedlings should be excluded. Control of weeds (which may hide rodents or rabbits), repellants or poisons, hunting and the use of tree shelters should be considered to reduce damage from wild animals. New plantings should be monitored for potential insect and disease problems and appropriate control measures taken if significant problems are found.

Replanting: Some plants will be lost over time to a variety of causes. The decision to re-plant for some or all of the losses will be based on whether or not the remaining plants will likely meet the desired purpose(s) and any program requirements. After two growing seasons, a final status check of the plantings or regeneration should be conducted. For this planting, an acceptable level of plant survival is _____ woody plants per acre or _____ percent of the original planting rate.

Operation and Maintenance - summary

1. Competing vegetation will be controlled until the woody plants are established.
2. State noxious weeds will be controlled.
3. Replanting will be required when survival is inadequate.
4. Supplemental water will be provided as needed and where feasible.
5. Plantings will be inspected periodically and protected from adverse impacts including insects, diseases, competing vegetation, wildfire and damage from livestock or wildlife.
6. Periodic applications of nutrients may be needed to maintain desired plant vigor.

Additional Comments: