

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**TREE/SHRUB ESTABLISHMENT**

(Acre)

CODE 612

**DEFINITION**

Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.

**PURPOSE**

To establish woody plants for forest products, wildlife habitat, long-term erosion control and improvement of water quality, treat waste, reduction of air pollution, sequestration of carbon, energy conservation, and enhance aesthetics.

**CONDITIONS WHERE PRACTICE APPLIES**

On any area where woody plants can be grown.

**CRITERIA**

**General Criteria Applicable To All Purposes**

Comply with applicable federal, state, and local laws and regulations during the installation, operation and maintenance of this practice.

Species will be adapted to site conditions (refer to Section Windbreak Interpretations Conservation Tree/Shrub Groups) and suitable for the planned purpose(s).

Planting or seeding rates will be adequate to accomplish the planned purpose and will be designed according to Tree/Shrub Planting Design Procedures (612DP).

Procedures and requirements for tree/shrub plantings including: site preparation; planting stock requirements; planting dates; planting operations; control of competitive vegetation after planting; cover between rows; care and maintenance (including replanting); direct seeding methods; drip watering systems and fabric mulch installation will

be done according to Tree/Shrub Planting Procedures (380TPP).

Planting dates, and care in handling and planting of the seed, cuttings or seedlings will ensure that planted materials have an acceptable rate of survival.

Only viable, high-quality and adapted planting stock or seed will be used.

Site preparation shall be sufficient for establishment and growth of selected species.

Adequate seed or advanced reproduction needs to be present or provided for when using natural regeneration to establish a stand.

Timing and use of planting equipment will be appropriate for the site and soil conditions.

The acceptability and timing of coppice regeneration shall be based on species, age, and diameter.

The planting will be protected from unacceptable adverse impacts from pests, wildlife, livestock damage, or fire (refer to Tree/Shrub Planting Procedures (380TPP) for detailed guidelines).

Each site will be evaluated to determine if mulching, supplemental water or other cultural treatments will be needed to assure adequate survival and growth.

**Additional Criteria For Improving Or Restoring Natural Diversity**

Species selected will be indigenous to the site and will reflect species composition of the desired stands. Refer to Restoration of Rare and Declining Habitats (643) for guidelines for restoring declining forest habitats.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

### CONSIDERATIONS

When underplanting, trees should be planted sufficiently in advance of overstory removal to ensure full establishment.

Consider establishing trees/shrubs through natural regeneration when seed or current tree/shrub reproduction is adequate to establish an acceptable stand in the time frame desired. Existing or expected regeneration needs to be protected from domestic and/or wild animals, fire, logging, herbicide damage, etc. Natural regeneration coupled with appropriate management techniques can be successful with some tree/shrub species. Trees/shrubs must be desirable and meet the objectives of the customer and the appropriate criteria and considerations in this standard. Contact your local forester for assistance.

Use locally adapted seed, seedlings or cuttings. Priority will be given to plant materials that have been selected and tested in tree/shrub improvement programs. All plant materials should comply with a minimum standard, such as the American Nursery and Landscape Association, Nebraska Forest Service, or state-approved nursery.

Plans for landscape and beautification plantings should consider foliage color, season and color of flowering, and mature plant height.

Where multiple species are available to accomplish the planned objective, consideration should be given to selecting species which best meet wildlife needs.

Tree/shrub arrangement and spacing should allow for and anticipate the need for future access lanes for purposes of stand management.

Residual chemical carryover should be evaluated prior to planting.

Species considered locally invasive or noxious should not be used.

Species used to treat waste should have fast growth characteristics, extensive root systems, capable of high nutrient uptake, and may produce wood/fiber products in short rotations.

For optimal carbon storage, select plant species that are adapted to the site to assure strong health

and vigor and plant the full stocking rate for the site.

### PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.

Specifications/practice design will be based on this practice standard (612) and procedures found in the Tree/Shrub Design Procedures (612DP) and Tree/Shrub Planting Procedures (380TPP). For additional guidance refer to University of Nebraska Neb Guides and other references at <http://www.ianr.edu/pubs/forestry>. Specifications for planting bare root and potted stock will contain the following data as a minimum:

1. Conservation Tree/Shrub Suitability Group (based on soils on the site)
2. Site preparation including method utilized to eliminate aggressive dense sod forming grasses
3. Planting methods
4. Species to be planted in each row and grass or other cover between rows
5. Plant to Plant Spacing and/or spacing within and between tree rows
6. Planned weed control within and between tree rows
7. Notes concerning site/planting/plant material conditions (i.e. moldy/non-dormant stock, too dry or too wet, high temps, low humidity, high winds, plant material handling, water at site, etc.)
8. Maps or drawings as needed to show location and site layout
9. Operation and Maintenance plan that details O&M needed for a successful tree planting.
10. Narrative statements as needed

Specifications for direct seeding methods will contain information detailed in Tree/Shrub Planting Procedures (380TPP).

## **OPERATION AND MAINTENANCE**

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance). Refer to Tree/Shrub Planting Procedures (380TPP) for detailed care and maintenance requirements.

If needed, competing vegetation will be controlled until the woody plants are established. Noxious weeds will be controlled.

Replanting will be required when survival is inadequate. (Refer to Nebraska Forestry Technical Note No. 63 for detailed replanting requirements).

Supplemental water will be provided as needed.

The trees and shrubs will be inspected periodically and protected from adverse impacts including insects, diseases or competing vegetation, fire and damage from livestock or wildlife.

Periodic applications of nutrients may be needed to maintain plant vigor.