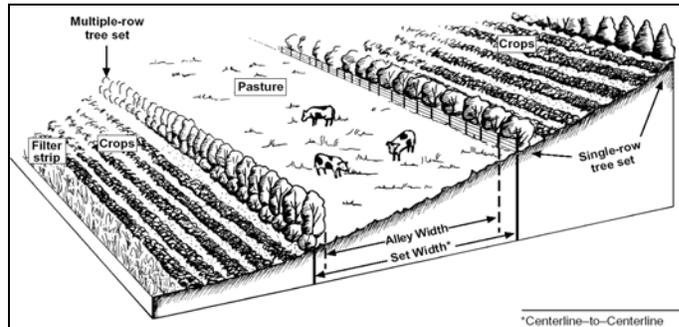


Prepared for: _____

Prepared by: _____

Farm: _____ Tract: _____ Date: _____



Alley width depends on purpose, tree canopy, crop sensitivity, crop rotation, crop or forage grown.

DEFINITION

Trees or shrubs planted sets single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the sets of woody plants that produce additional products.

PURPOSE

Alley cropping is a multipurpose practice designed to reduce surface water runoff and erosion, alter water table depths, improve utilization and reduce offsite movement of nutrients, modify the microclimate for improved crop production, increase carbon storage in plant biomass and soils, improve air quality, and provide habitat for wildlife.

WHERE APPLICABLE

Practice applies on cropland or hayland where trees, shrubs, crops and/or forages can be grown in combination.

RESOURCE MANAGEMENT SYSTEM

Alley cropping is normally established concurrently with conservation crop rotation, nutrient and pest management, residue management and other practices as part of a resource management system for a conservation management unit. Prescribed grazing and other forage-related practices need to be applied when forage crops are used. When alley cropping is used for erosion control,

trees are planted on the contour in conjunction with herbaceous vegetation.

1. Species diversity including use of native species should be considered to avoid loss of function due to species-specific pests or enhance wildlife needs.
2. Consider plant characteristics (rooting depths, growth pattern, etc.) of woody plantings and alley crops; where possible, choose planting sets that compliment each other (i.e. one growing while one dormant, one deep and one shallow rooted, etc.).
3. Crown expansion of woody plantings may eventually begin to shade alley areas and more shade resistant alley corps or forages may be required. If light demanding crops/forages are desired for more than 15 years, widen alleys to 40 feet or more.
4. High value trees or shrubs should be selected to maximize economic returns.

WILDLIFE

Alley cropping provides excellent opportunities to improve wildlife habitat for some species by creating travel lanes, and connecting important habitat areas or infield cover. Trees and/or shrubs and herbaceous species are usually required to create wildlife travel lanes as well as cover for breeding, feeding, and resting.

OPERATION AND MAINTENANCE

Replace dead and dying woody species in newly established sets.

Inspect trees/shrub sets, crops, and/or forages periodically and protect from adverse impacts including insects, diseases or competing vegetation. Tree/shrub sets will be protected from fire and damage from livestock or wildlife.

All other specified maintenance measures and techniques of tree/shrub establishment will continue until plant survival and establishment are assured. This includes pruning of dead or damaged branches for safety reasons, periodic pruning of selected branches for control of product quality, and control of undesirable competing vegetation.

Additional Operation and Maintenance requirements specific to this Plan:

Landowner _____ Field number _____

SPECIFICATIONS

Site-specific requirements are listed on the specifications sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide.

| Purpose (check all that apply) | |
|---|---|
| <input type="checkbox"/> Improve crop or forage quality and quantity by enhancing microclimatic conditions. | <input type="checkbox"/> Enhance wildlife habitat. |
| <input type="checkbox"/> Reduce surface water runoff and erosion. | <input type="checkbox"/> Improve air quality. |
| <input type="checkbox"/> Improve utilization and recycling of soil nutrients. | <input type="checkbox"/> Decrease movement offsite of nutrients or chemicals. |
| <input type="checkbox"/> Reduce subsurface water quantity or alter water table depths. | <input type="checkbox"/> Increase net carbon storage in the plant biomass and soil. |
| <input type="checkbox"/> Increase net carbon storage in the vegetation and soil. | |

| Layout |
|---|
| Alley width ¹ (ft): _____ |
| Spacing between tree/shrub sets ² (ft): _____ |
| Tree/shrub set orientations: ___ Contour; ___ North/South, ___ East/West, ___ |
| Other (specify) _____ |

¹Distance available for herbaceous crops; set equal to multiple agricultural equipment widths. ²Distance from center of one set to center of the next set.

| Woody Plant Materials Information | | | | |
|---|------------------------------|--|---------------------------------|--|
| Planting date: _____ | | | | |
| Species/cultivar by set and row number: (indicate set and row numbers on the job sheet sketch) | Kind of stock ³ : | Distance between plants within row (ft): | Total number of plants for row: | Distance (ft) from this row to next row ⁴ : |
| <i>Set # 1:1</i> | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | -- |
| <i>Set # 2:1</i> | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | -- |

³BArreroot, COntainer, CUtting; include size, caliper, height, and age as applicable.
⁴Adjusted for width of maintenance equipment.

| |
|---|
| Temporary Storage Instructions |
| <i>Planting stock that is dormant may be stored temporarily in a cooler or protected area. For stock that is expected to begin growth before planting, dig a V-shaped trench (heeling-in-bed) sufficiently deep and bury seedlings so that all roots are covered by soil. Pack the soil firmly and water thoroughly.</i> |
| Site Preparation |
| <i>Remove debris and control competing vegetation to allow enough spots or sites for planting and planting equipment. Prepare supplemental moisture materials for installation if required by trees and/or shrubs. Add soil amendments as follows:</i> Additional requirements: |
| Planting Methods |
| <i>For container and bareroot stock, plant stock to a depth even with the root collar in holes deep and wide enough to fully extend the roots. Pack the soil firmly around each plant. Cuttings are inserted in moist soil with at least 2 to 3 buds showing above ground. Plant during the months of _____ to _____.</i> Additional requirements: |
| Operation and Maintenance |
| |

LANDOWNER’S/OPERATOR’S ACKNOWLEDGEMENT:

The landowner/operator acknowledges that:

- a. He/she has received a copy of the drawings and specifications, and that he/she has an understanding of the contents and the requirements.
- b. He/she has obtained all the necessary permits.
- 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 project life.

I HAVE REVIEWED THIS PLAN AND AGREE TO INSTALL AS DESIGNED.

COOPERATOR _____ DATE _____

PRACTICE COMPLETION:

I have made an on-site inspection of the site (or I am accepting owner/contractor documentation), and have determined that the job as installed does conform to the drawings and practice specifications.

Completion Certification by:

PLANNER _____ DATE _____