

Field Border – shrub planting

Virginia Conservation Practice Job Sheet

386(b)



Definition

Field borders are strips of permanent vegetation established at the edge or around the perimeter of a field. Vegetation consists of adapted grasses, legumes, and/or shrubs.

Purpose

A field border is used to reduce soil erosion from wind and water, protect soil and water quality, manage harmful insect populations, provide wildlife food and cover, increase carbon storage in biomass and soil and/or improve air quality.

Where used

Field borders are located at the edges of crop fields and can connect to other buffer practices within fields. They may also apply to recreational land or on other land where agronomic crops are grown.

Conservation Management System

Field borders are normally established as part of a conservation management system to address the soil, water, air, plant, and animal needs, including wildlife, and the owner's objectives. Field borders used with

contouring, contour stripcropping, cross-slope farming patterns, or terraces eliminate the normal planting of

end rows or headlands in uphill and downhill directions.

Field borders also provide a turning area for farm equipment, which reduces sheet, rill, and gully erosion. In addition, field borders can provide forage production and improve farm aesthetics. They are most effective when used in combination with other agronomic or structural practices to provide conservation benefits. **If enrolled in WHIP or CRP, borders shall not be used for forage, turn rows, roads, or for storage of crops or equipment.**

Wildlife

Field borders can enhance wildlife objectives. Benefits depend on the vegetative species used and management practiced. Use adapted native vegetation to provide food and cover for important wildlife species. Increase width, if needed to provide necessary protection for nesting animals from predators. Avoid mowing field borders between April 15th and August 15th which is the primary nesting season for ground-nesting birds and animals. When managing field borders for wildlife, never disturb (such as burning or disking) more than 50 percent of the field borders surrounding a field in any one year.

Operation and maintenance

Competition control shall be controlled until the shrubs become established, usually the first year. To control competition and prevent weed seed formation, mowing 4-6 feet around the base of the shrub as recommended by NRCS, Virginia Department of Game and Inland Fisheries, or a Technical Service Provider. Herbicides may be used but should be specific to the species being managed to ensure there is no damage to the shrubs.

Inspect and repair field borders after storms to fill in gullies, remove sediment, reseed disturbed areas, and take other measures to ensure the effectiveness of the border.

If the field border is being established under a program, the participant must follow management requirements as outlined in the program specific management and maintenance job sheet that is attached.

Specifications

Field borders are a minimum of 35 feet wide. Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide and the Virginia Field Border practice standard (386). Refer also to practice standards Upland Wildlife Habitat Management code 645, Early Successional Habitat Development code 647, Tree and Shrub Establishment code 612 and Hedgerow Planting Code 422. For whole field shrub and tree planting, follow standard and job sheet 612.

Planting Specifications

Shrub plantings will be a minimum of 35 feet wide, outside row to outside row. Only native trees and shrubs will be planted. A minimum of 30 percent of the seedlings will be shrubs. A maximum of 50 percent of the seedlings may be hardwood trees. A maximum of 30 percent of the seedlings may be evergreen trees. A minimum of four species of shrubs and three species of trees will be planted. Trees will be planted on 10 to 12 foot spacing. Shrubs will be planted on 6 to 8 foot spacing

Temporary Storage

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. Additional requirements:

Competition Control Before Planting

Competition control is critical to ensuring a good stand. Conventional seedbed preparation, herbicide application or both may be used to control competition prior to planting.

Several steps are required to get successful undesirable competition control when using herbicide especially on fescue stands. The first step in killing fescue is to mow the area in late summer for a fall herbicide burn down. If possible after mowing and prior to herbicide application, remove the cut vegetation by prescribed burn to provide a better seed bed and allow for better herbicide contact with vegetation.

A second herbicide application is required for dense fescue or orchard grass stands and other areas

where competition may not be controlled by one herbicide application.

Planting

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.

Shrubs will be planted on 5 x 10 foot spacings except for Lespedeza which will be on 3 foot spacings. The design looks like figure 1.

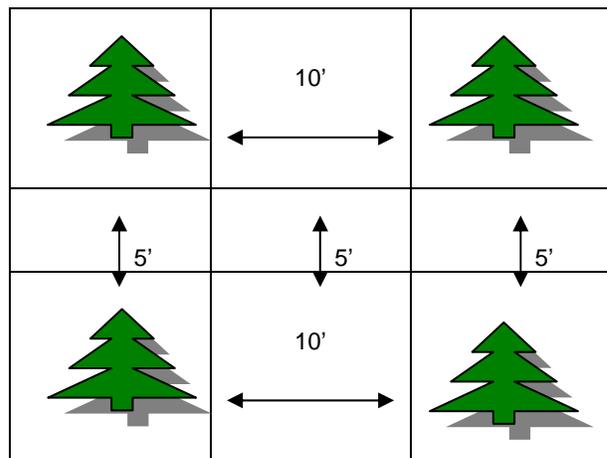


Figure 1. Schematic of shrub planting.



Table 1. This table contains several options for controlling competing, non-desirable vegetation during native grass establishment. If two burn downs are planned, records should indicate that the herbicide was applied to the field twice. Eastern Gama grass and some forbs/wildflowers may not be compatible with imazameth containing products (check label for compatibility). All herbicides shall be applied and used according to label recommendations and may slightly differ from that listed below.

Option	Current Condition	Timing	Method
1 Single Burn Down	Grassland Or Cropland	Spring	<p>(This option should not be used when tall Fescue or Orchardgrass is the predominant cover. Two herbicide burndowns are required when Fescue is the predominant cover.)</p> <ol style="list-style-type: none"> 1. Remove excess vegetation in fall or winter. 2. Apply tank mixture after vegetation has grown 4 to 6 inches. <u>Tank Mixture: per acre in April – June</u> Apply 1.5 quarts glyphosate base product. May be tanked mixed with a glyphosate/imazameth mixture at a rate of 10.7 oz/acre. <p>If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.</p>
2 Two Burn Downs	Grassland	Fall And Spring	<ol style="list-style-type: none"> 1. Remove excess vegetation in late summer (Aug./Sept.). 2. Apply tank mixture after vegetation has actively grown to 4 to 6 inches. <u>Tank Mixture: per acre in Sept./Oct.</u> 1 to 2 quarts glyphosate based product. Follow all label instructions. <p>AND</p> <ol style="list-style-type: none"> 3. Apply tank mixture just prior to planting and after remaining vegetation grows 4 to 6 inches <u>Tank Mixture: per acre in April-June</u> Apply 1.5 quarts glyphosate based product. May be tank mixed with glyphosate/imazameth mixture at a rate of 10.7 oz/acre. If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.
3 Two Burn Downs	Grassland	Spring And Spring	<ol style="list-style-type: none"> 1. Remove excess vegetation in fall or winter 2. Apply tank mixture after vegetation has actively grown 4 to 6 inches. <u>Tank mixture: per acre in April</u> 1 to 2 quarts glyphosate based product. <p>IF green-up occurs two to four weeks after initial spraying:</p> <ol style="list-style-type: none"> 3. Apply tank mixture just prior to planting and after remaining vegetation grows at least 4 to 6 inches. <u>Tank mixture: per acre in April-June</u> Apply 1.5 quarts glyphosate based product. May be tank mixed with glyphosate/imazameth mixture at a rate of 10.7 oz/acre. If imazameth alone is available, it can be applied instead of the glyphosate/imazameth mixture at a rate of 4-8 oz per acre. Follow all label instructions.

*NRCS does not require specific herbicides by trade name and recommendations on herbicides and specifications on rate and timing should come from an extension agent.

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Shrub Planting Job Sheet 386(b)

<i>Landowner:</i>	<i>Farm #:</i>
<i>Field(s):</i>	<i>Tract #:</i>
<i>Designed By:</i>	<i>Date:</i>
<i>Drawing No(s):</i>	<i>Signature:</i>

Field Number	Field Border Width (ft) (minimum 35 ft)	Pre-Planting Application(s) [Tentative Date]	Comments	Cover crop & Rate (year 1 only)

Installation shall be in accordance with the specified drawings, specifications, and special requirements. **No changes are to be made in the drawings or specifications without prior approval from the technical specialist developing the plan.**

Sketch of Layout

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