



CONSERVATION ENHANCEMENT ACTIVITY

E386A

CONSERVATION STEWARDSHIP PROGRAM

Enhanced field borders to reduce soil erosion along the edge(s) of a field

Conservation Practice 386: Field Border

APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial); Associated Ag Land

RESOURCE CONCERN: Soil

ENHANCEMENT LIFE SPAN: 10 years

Enhancement Description:

Enhance existing field borders to a width of at least 30 feet and establish a single species or mixture of species that provide a dense ground cover along the edge(s) of the field.

Criteria:

- Field borders shall be established at selected field edges at a width of at least 30 feet.
- Locate borders to eliminate sloping end rows, headlands, and other areas where concentrated water flows will enter or exit the field.
- Orient plant rows as closely as possible to perpendicular to sheet flow direction (water erosion) or most erosion wind directions (wind erosion).
- Field borders shall be established to adapted species of permanent grass, forbs and/or shrubs that accomplish the design objective.
- Plants selected for field borders will have the physical characteristics necessary to control wind and water erosion to tolerable levels on the field border area. No plant listed by the state as a noxious or invasive species shall be established in the field border.
- Seedbed preparation, seeding rates, dates, depths, fertility requirements, and planting methods will be consistent with approved local criteria and site conditions.

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- Ephemeral gullies and rills present in the planned border area will be eliminated as part of seedbed preparation. If present, ephemeral gullies and rills located immediately upslope from the planned border area need to be treated to ensure more of a sheet flow into the planned border area.
- Field border establishment, in conjunction with other practices, will be timed so that the soil will be adequately protected during the critical erosion period(s).
- Establish stiff-stemmed, upright grasses, grass/legumes or forbs to trap water- borne soil particles.
- The amount of surface and/or canopy cover needed from the field border shall be determined using current approved water and wind erosion prediction technology. Soil erosion estimates shall account for the effects of other practices in the management system.
- Operation and maintenance requirements:
 - Repair storm damage.
 - Remove sediment from above, within and along the leading edge of the field border when accumulated sediment either alters the function of the field border or threatens the degradation of the planted species.
 - Shut off sprayers and raise tillage equipment to avoid damage to field borders.
 - Shape and reseed border areas damaged by animals, chemicals, tillage, or equipment traffic.
 - Do not use the field border as a hay yard or machinery parking lot for any extended period of time, especially if doing so will damage or impair the function of the field border.
 - Maintain desired vegetative communities and plant vigor by liming, fertilizing, mowing, disking, or burning and controlling noxious and invasive weeds to sustain effectiveness of the border.
 - Repair and reseed ephemeral gullies and rills that develop in the border.
 - Minimally invasive vertical tillage (e.g. paraplowing) may be performed in rare cases where compaction and vehicle traffic have degraded the field border function. The



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- purpose of the tillage is strictly to relieve soil compaction and increase infiltration rates to provide a better media for reestablishment of vegetation and field border function.
- When managing for wildlife, maintenance activities that result in disturbance of vegetation should not be conducted during the primary nesting, fawning and calving seasons. Activities should be timed to allow for regrowth before the growing season ends whenever possible.
 - Periodic removal of some products such as medicinal herbs, nuts, and fruits is permitted provided the conservation purpose is not compromised by the loss of vegetation or harvesting disturbance.
 - Avoid vehicle traffic when soil moisture conditions are saturated.
 - Maintain records of the field border maintenance as needed by the land user.



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Documentation and Implementation Requirements:

Participant will:

- Prior to implementation, prepare the planned area for vegetation establishment. Refer to NRCS Conservation Practice Standard Field Border (Code 386). (NRCS will provide technical assistance, as needed.) Total planned amount of field border extension = _____ feet

- Prior to implementation, select adapted species of permanent grass, forbs and/or shrubs that accomplish the design objective and are best suited to site conditions. (NRCS will provide technical assistance, as needed.)

Species	Seeding Rate (lb/ac pure live seed)	Note specific species characteristic(s)

- Prior to implementation, determine liming and fertilizer requirements, planting technique and timing appropriate for the site and soil conditions. (NRCS will provide technical assistance, as needed.)

Planting Date	
Planting Technique	
Lime and Fertilizer Required	

- During implementation, install and maintain erosion control measures as needed for the site. (NRCS will provide technical assistance, as needed.)
- During implementation, notify NRCS of any planned changes to verify changes meet NRCS enhancement criteria.
- During implementation, protect the planting from plant and animal pests and fire.
- After implementation, maintain and protect the planting from plant and animal pests and fire.
- After implementation, verify the total amount of field border implemented. Total implemented amount of field border extension = _____ feet



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NRCS will:

- Prior to implementation, verify the enhancement is planned within the field(s) or farm boundary.
- Prior to implementation, provide and explain NRCS Conservation Practice Field Border (Code 386) as it relates to implementing this enhancement.
- Prior to implementation, verify the enhancement is planned for acres that have been appropriately prepared for vegetation establishment. Total planned amount of field border extension = _____feet
- Prior to implementation, verify no plants on the Federal or state noxious weeds list are included.
- As needed, prior to implementation, NRCS will provide technical assistance:
 - Planning site preparation meeting NRCS Conservation Practice Standard Field Border (Code 386).
 - Selecting the adapted species of permanent grass, forbs and/or shrubs that accomplish the design objective and are best suited to site conditions.
 - Selecting planting techniques and timing appropriate for the site and soil conditions.
 - Planning the use of additional erosion control, as needed for the site.
 - Preparing specifications for applying this enhancement for each site using approved state implementation requirements, national technical notes, appropriate state technical notes, and narrative statements in the conservation plan, or other acceptable documentation.
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.
- After implementation, verify the vegetation was established to specifications developed for the site.
- After implementation, verify the planting is protected from pests and fire.

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- After implementation, verify all erosion control needed for the site is functioning and is maintained to specifications developed for the site.
- After implementation, verify the total amount of field border implemented. Total implemented amount of field border extension = _____ feet

NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date

ALABAMA – E386A Supplement- Enhanced field borders to reduce soil erosion along the edge(s) of a field

Enhance **existing** field borders to a width of at least 30 ft by establishing a perennial grass for the purpose of reducing soil erosion.

Requirements:

- 1.** Plan map will show all fields and locations of the borders that are to be extended along with extents (width and length). Field borders will be a minimum of 30 ft. and a maximum of 60 ft. for this purpose.
- 2.** Grasses must be perennial but can be introduced or native. Refer to NRCS Conservation Practice Standard 512- Forage and Biomass Planting.
- 3.** Locate borders to eliminate sloping end rows. Rows should be oriented as closely as possible to perpendicular to sheet flow direction.
- 4.** Field borders should not be used as storage areas.
- 5.** No herbicide overspray should occur on borders when spraying field crops. Any vegetation destroyed by herbicides or tillage must be re-established.
- 6.** Borders with introduced grasses should be mowed annually for maintenance. Apply lime and fertilizer as needed to maintain vegetation in vigorous condition. Spot spray invasive or woody vegetation. Follow all herbicide label requirements.
- 7.** Apply lime and fertilizer according to soil test recommendations for establishment.
- 8.** Receipts for seed, fertilizer, and lime are required. Seed tags should include species and variety, germination, and purity. Complete all documentation on the national jobsheet.

Table 1. WARM SEASON - Forage Crops Commonly Grown for Pasture or Hay in Alabama.

	SEEDING RATE (LBS./A)	SEEDING DEPTH (IN.)	PLANTING DATE			REMARKS
			NORTH	CENTRAL	SOUTH	
<u>GRASSES - Perennial</u>						
BAHIAGRASS ^{1/}	15 - 20	¼ - ½	-	Mar - Jul 15	Feb - Nov	Adapted to sandy soils; tolerates drought and poor drainage. Lower seeding rate for Tift 9 and Tifquick.
BERMUDAGRASS ^{8/} SEED (HULLED)	5	¼ - ½	Apr - Jul 15	Mar 15-Jul 15	Mar - Jul 15	Adapted to sandy soils; tolerates drought; responds to nitrogen; potassium is important for survival and production.
BERMUDAGRASS – SPRIGS ^{2/}			Apr - Jul 15	Mar 15-Jul 15	Mar - Aug 15	Adapted to sandy soils; tolerates drought; responds to nitrogen; potassium is important for survival and production.
- ROWS (≤ 24 IN WIDE)	30 bu.	3 – 6				
- BROADCAST (> 24 IN WIDE)	45 bu.	2 – 4				
BIG BLUESTEM	12 lbs. PLS BC; 9 lbs. PLS Drilled ^{3/}	¼ - ½	Apr - May 15	Mar 15 - Apr	Mar - Apr	Do not continuously graze. Deep well-drained soils preferred.
DALLISGRASS	10 lbs. PLS	¼ - ½	Mar 15 - Jul 1	Mar - Jul 1	Feb - Jul 1	Best adapted to moist sites & Blackbelt soils.
EAST. GAMAGRASS ^{4/}	8 lbs. PLS Drilled/Rows	1 – 1½	Apr - Jul 1	Mar 15 - Jul 15	Mar - Jul 15	Best adapted to moist bottoms & stream terraces. Do not continuously graze.
INDIANGRASS	12 lbs. PLS BC; 9 lbs. PLS Drilled	¼ - ½	Apr – June 15	Apr – June 15	Apr – June 15	Adapted to well drained, fertile clay soils. Heat and drought tolerant. Do not continuously graze.
LITTLE BLUESTEM	8 lbs. PLS BC; 6 lbs PLS Drilled	¼ - ½	Apr – June 15	Apr – June 15	Apr – June 15	Does not tolerate poorly drained soils. Do not continuously graze. Drought resistant. Recommended for mixtures with Big Bluestem and Indiangrass.
SWITCHGRASS ^{4, 7/}	5 lbs. PLS BC; 4 lbs. PLS Drilled	¼ - ½	Apr – Jul 15	Mar 15 - Jul 15	Mar – Jul 1	Adapted to soils with good moisture. Tolerates poorly drained soils. Do not continuously graze. May be grown for biomass.

Table 2. COOL SEASON - Forage Crops Commonly Grown for Pasture or Hay in Alabama.

FORAGE CROP ^{9/}	SEEDING RATE (LBS./A)	SEEDING DEPTH (IN.)	PLANTING DATE			Remarks
			NORTH	CENTRAL	SOUTH	
<u>GRASSES - Perennial</u>						
TALL FESCUE ^{5/} (fungus friendly)	Drilled 15 B-Cast 20	¼ -½	Sep - Nov 1	Sep - Nov 1	Sep 15 - Nov 15 ^{6/}	Best adapted to fertile soils with good moisture holding capacity. Fungus friendly endophyte (E+) only.

^{1/} -Bahia grass plantings (excepted variety information from ACES recommendations):

- **Pensacola, Tift9, Tifquick, UF Riata** cultivars: S, C and N counties contiguous to Central Alabama plus St. Clair, Calhoun, and Cleburne.
- **Argentine** cultivar: S
- Fall plantings of bahia grass should include 45 lbs. /ac of small grain to provide cover during winter months.

^{2/} -Use broadcast rates for machine planting in rows > 24 inches wide.

^{3/} _ Drill – Drilled; B-Cast – Broadcast; and PLS = Pure Live Seed. PLS = % Germination X % Purity. (Refer to the Alabama Planting Guides for Grasses and Legumes links noted in the references).

^{4/} _ May be included in a mixture of other native grasses, Indiangrass & big bluestem, on a trial basis.

See AL NRCS conservation practice standard, Conservation Cover – Code 327 for seeding mixtures and rates.

^{5/} _ Only endophyte friendly varieties of tall fescue shall be planted.

^{6/} _ Fescue seeding in south Alabama is limited to subclass w soils except in MLRA 135.

^{7/} _ May be planted for biomass production purposes.

^{8/} _ Seeded hybrid bermudagrasses recommended for forage purposes only when it's documented that fields are not large enough for sprigging hybrid bermudagrass.

^{9/} Coated seed. Increase the seeding rate accordingly to account for the increased weight from the coating on the seed. This includes pre-inoculated seed. Refer to the seed tag for information on the coating or inert content per cent.

