

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

FIELD BORDER

(Ac.)

CODE 386

DEFINITION

A strip of permanent vegetation established at the edge or around the perimeter of a field.

PURPOSE

This practice may be applied to accomplish one or more of the following:

- Reduce erosion from wind and water
- Protect soil and water quality
- Manage pest populations
- Provide wildlife food and cover
- Increase carbon storage
- Improve air quality

CONDITIONS WHERE PRACTICE APPLIES

This practice is applied around the perimeter of fields. Its use can support or connect other buffer practices within and between fields. This practice may also apply to recreation land or other land uses where agronomic crops including forages are grown.

CRITERIA

General Criteria Applicable to All Purposes

Field borders shall be established around the field edges to the extent needed to meet the resource needs and producer objectives. Minimum field border widths shall be based on local design criteria specific to the purpose or purposes for installing the practice.

The field borders shall be established to

adapted species of permanent grass, legumes and/or shrubs that accomplish the design objective and do not function as host for diseases of the field crop.

Field borders shall be established to adapted species of permanent grasses, legumes and/or shrubs (see SC NRCS Conservation Practice Standards for Conservation Cover and Critical Area Planting), except as noted below. Field borders with slopes of less than 2% and on which the primary resource concern is wildlife habitat may be maintained in volunteer early successional herbaceous vegetation. Field borders with slopes of less than 2% and with primary resource concerns other than wildlife habitat may be in a sod of volunteer herbaceous vegetation. However, in the latter situation the field border will be maintained by mowing or burning rather than disking. For borders that are to be established from volunteer herbaceous vegetation, planting of an annual grass or legume at establishment to provide temporary cover is suggested, particularly if there is an erosion concern.

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.

Seedbed preparation, seeding rates, dates, depths, fertility requirements, and planting methods will be consistent with appropriate SC NRCS conservation practice standards for establishing cover and/or Clemson University Cooperative Extension Service planting guides.

Ephemeral gullies and rills present in the planned border area will be eliminated as part of seedbed

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact your Natural Resources Conservation Service State Office or visit the [electronic Field Office Technical Guide](#).

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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.

Additional Criteria to Reduce Erosion from Wind and Water

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 wind- or 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. Calculations shall account for the effects of other practices in the management system. *However, field borders designed for control of wind and/or water erosion shall be a minimum of 15 feet in width. If the field border is also to be used to facilitate incidental field access and turning of equipment, the plant species to be established must be capable of withstanding the anticipated vehicular traffic. Regular vehicular traffic on the field border will be prohibited.*

Wind Erosion Reduction. Locate borders to provide a stable area on the windward edge of the field as determined by prevailing wind direction data.

Minimum height of grass or forbs shall be one foot during the critical erosion period.

Water Erosion Reduction. 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.

Additional Criteria to Protect Soil and Water Quality

Do not burn the field border if the main goal of the field border is to protect soil or water quality.

Reducing Runoff and Increasing Infiltration.

Locate borders around the perimeter of the field, or as a minimum, install borders to eliminate sloping end rows, headlands and other areas where concentrated water flows will enter or exit the field.

Water Quality – Adsorbed, Dissolved and Suspended Contaminants.

As a minimum, locate field borders along the edge(s) of the field where runoff enters or leaves the field. The minimum width for this purpose shall be 30 feet and have a vegetation stem density/retardance of moderate to high (e.g. equivalent to a good stand of wheat).

If borders are to maintain field setback distances for manure and/or chemical applications, the border widths will be designed to conform to minimum field application setback widths established by *SCDHEC Regulations (see "Standards for Permitting of Agricultural Animal Facilities", SCDHEC Reg. 61-43) and applicable local regulations. Borders to provide setbacks for chemical applications shall also comply with any provisions on the label for the respective chemical.*

Reducing Soil Compaction from Equipment Parking and Traffic.

Border widths will be designed to accommodate equipment turning, parking, loading/unloading equipment, grain harvest operations, etc.

Additional Criteria to Manage Pest Populations

Provide a Harbor for Beneficial organisms (e.g. insects, mites, etc.). Include appropriate plants that attract beneficial organisms that prey on target pests.

Mowing, harvesting, pesticide applications and other disturbance activities will be scheduled to accommodate life cycle requirements of the beneficial organisms.

Provide a Habitat to Cause Pests to Congregate.

Select plants for the field border that attract pests (e.g. alfalfa strips planted to lure lygus bugs away from a cotton crop).

Additional Criteria to Provide Wildlife Food and Cover

Establish plant species that provide wildlife food and cover for the target wildlife species.

Field borders designed with a primary benefit of providing habitat for wildlife shall be at least 25 feet in width.

Plants (particularly native grasses, forbs and legumes) that provide cover and food for wildlife shall be used. Volunteer establishment of cover is acceptable and encouraged if the volunteer cover will meet other objectives for the field border. Establish plant species that provide wildlife food and cover for the target wildlife species.

Establish plant species that provide wildlife food and cover for the target wildlife species.

Schedule mowing, harvest, and weed control activities within the field border to accommodate reproduction and other life cycle requirements of target wildlife species.

Disking, burning or mowing outside the primary nesting season (April 1 – September 1) may be used for maintenance every third year.

Vehicular traffic will be kept to a minimum and regular vehicular traffic will be prohibited.

Regular vehicular traffic will be outside the 25 feet border.

Vegetative successional state shall be maintained to accommodate target wildlife species requirements.

When wildlife is a concern, a lower percent groundcover than would be needed if protecting soil and water quality was the only goal is acceptable as long as the soil resource concern is also adequately addressed (i.e. no excessive soil loss). This may be achieved by simply increasing the field border width.

Additional Criteria to Increase Carbon Storage

Establish plant species that will produce adequate above- and below-ground biomass for the site (i.e. a positive soil conditioning index).

Maximize the width and length of the herbaceous border to fit the site and increase total biomass production.

Do not burn if the main goal of the field border is carbon storage.

Do not disturb the roots of the established vegetation with tillage.

Additional Criteria to Improve Air Quality

Establish plant species with morphological characteristics that optimize interception and adhesion of airborne particulates. Select plants with persistent roots and residue that stabilize soil aggregates and capture airborne soil particles.

Establish species resistant to damage from equipment traffic.

CONSIDERATIONS

Consider planting field borders around the entire field, not just on the field edges where water enters or leaves the field, for maximizing multiple resource protection.

Establishing a narrow strip of stiff-stemmed upright grass at the crop/field border interface can increase soil particle trapping efficiency of the field border.

Native plants are best suited for wildlife habitat enhancement and provide other ecological benefits where adapted to site conditions and when consistent with producer objectives.

Include native plants that provide diverse pollen and nectar sources to encourage local pollinator populations.

Use field borders as corridors to connect existing or planned habitat blocks.

Prescribed burning, strip disking, or selective herbicide applications are management tools that can be used to maintain suitable habitat for specifically desired wildlife species.

Overseed the field border with legumes for increased plant diversity, soil quality, and wildlife benefits.

Waterbars or berms may be needed to breakup or redirect concentrated water flow within the borders.

In selecting plant species to establish in the field border, among other items, consider the plant's tolerance to: