**NATURAL RESOURCES CONSERVATION SERVICE**

**CONSERVATION PRACTICE STANDARD**

# FIELD BORDER

**(Ft.)**

**CODE 386**

## DEFINITION

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

## PURPOSE

- Reduce erosion from wind and water
- Soil and water quality protection
- Management of harmful insect populations
- Provide wildlife food and cover
- Increase carbon storage in biomass and soils.
- Improve air quality
- Enabling organic certification buffer zone

## CONDITIONS WHERE PRACTICE APPLIES

At the edges of cropland fields and to connect other buffer practices within the field. May also apply to recreation land or other land uses where agronomic crops are grown.

## CRITERIA

***General Criteria Applicable to All Purposes***

Minimum field border widths shall be at least 20 feet wide or wider if necessary to turn farm equipment.

The field borders shall be established to adapted species of permanent grass, legumes and/or shrubs. Refer to Field Border Specifications (386S) for detailed guidelines.

Species selected will be based on Conservation Practice Standards 550, Range Planting; 512, Pasture Planting; and/or 645, Upland Wildlife Habitat Management.

Field borders shall be established around the field edges to the extent needed to meet the resource needs and producer objectives.

Seed rates will be a minimum of 40 PLS/$ft^2$ unless designed for Bobwhite Quail habitat.

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

***Additional Criteria to Reduce Erosion by Wind and Water***

**Wind Erosion Reduction.** Locate borders around the entire perimeter of the field, or as a minimum, provide a stable area on the upwind edge of the field as determined by prevailing wind direction data.

Establish stiff-stemmed, upright grasses to trap saltating soil particles.

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

**Water Erosion Reduction.** Locate borders around entire 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. If ephemeral gully or gully erosion is occurring from concentrated water flow, refer to Conservation Practice Standard 412, Grassed Waterway or Critical Area for Planting 342 as appropriate for additional requirements including seeding rates.

***Additional Criteria to Protect Soil and Water Quality***

**Reducing Runoff and Increasing Infiltration.** Locate borders around entire perimeter of the

field, or as a minimum, install borders to eliminate sloping end rows on areas that are 5 percent or steeper or excessively long slopes that are flatter, headlands and other areas where concentrated water flows will enter or exit the field.

**Maintaining Field Setback Distances for Manure and Chemical Applications.** Border widths will be designed to conform to minimum field application setback widths established by state, federal and local regulations.

**Sediment Trapping.** Locate borders around the entire perimeter of the field, or as a minimum, in areas where runoff enters or leaves the field. Refer to Conservation Practice Standard 393, Filter Strip, for additional requirements on field border filters.

**Reducing Soil Compaction from Equipment Parking and Traffic.** Border widths will be designed to accommodate equipment parking, loading/unloading equipment, grain harvest operations, etc.

***Additional Criteria for Management of Harmful Insect Populations.***

**Provide a Harbor for Beneficial Insects.** Include herbaceous plants that attract beneficial insects. See planning considerations for including shrubs.

Mowing, harvesting and pesticide applications will be scheduled to accommodate life cycle requirements of the beneficial insects.

or

**Provide a Habitat to Cause Pest Insects to Congregate.** Select plants for the field border that attract pest insects.

Use mechanical, cultural and/or chemical techniques to reduce pest populations when and where they congregate in the field border.

***Additional Criteria to Provide Wildlife Food and Cover***

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

Forbs and/or legumes must be included as an essential component with in seed mixtures to provide benefits to a wider array of wildlife species.

Minimum width for the purpose of wildlife habitat is 30 feet.

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

To meet the quality criteria requirements for wildlife habitat (food, water, cover, etc.) in Section III of the FOTG, the planned system must provide a total rating of 0.5 or higher for the conservation treatment unit. Rating shall be recorded using Cropland Habitat Evaluation Worksheet (NE-CPA-32).

Refer to the practice specifications for Field Borders – Bobwhite Quail Habitat (386S) for additional guidance on the design and implementation of field borders to benefit Northern Bobwhite Quail and other upland game birds.

***Additional Criteria to Improve Air Quality***

Establish plant species with foliar and structural characteristics that optimize interception, adsorption and absorption of airborne particulates.

Orient shrub rows will be oriented as closely as possible to perpendicular to the prevailing wind direction during the period of concern.

***Additional Criteria to Increase Carbon Storage in Biomass and Sequestration in the Soil***

Establish plant species that will produce the greatest above and below ground biomass for the site. Increasing the width of the field border will increase the potential for carbon sequestration.

***Additional Criteria to Enable Organic Certification Buffer Zone***

Establish an area located between a certified production operation or portion of a production operation and an adjacent land area that is not maintained under organic management. A buffer zone must be sufficient in size or other features (e.g., field border) to prevent the possibility of unintended contact by prohibited substances applied to adjacent land areas with an area that is part of a certified operation. For

more guidance refer to the USDA National Organic Program website at http://www.ams.usda.gov/nop/indexIE.htm and the Nebraska Department of Agriculture website at http://www.agr.state.ne.us/division/apd/organic.htm.

## CONSIDERATIONS

Field borders are more effective and provide more environmental benefits when planted around the entire field.

Field borders enhance the aesthetics and provide stability around the field edge. They also provide turn and travel areas for equipment and reduce airborne dust.

Field borders provide a good source of hay production refer to Conservation Practice Standard 512, Pasture and Hay Planting; and 511, Forage Harvest Management, for guidance.

To increase sediment trapping efficiency, consider establishing a narrow strip of stiff-stemmed upright grass at the crop/field border interface.

Field borders can be used to comply with required field setback distances applicable to manure and chemical applications.

Wildlife enhancement and other benefits of native plants should be discussed during planning.

Native species should be used when feasible and meet producer objectives.

Consider overseeding the border with legumes for plant diversity and wildlife benefits.

Schedule mowing, harvesting and weed control to accommodate wildlife nesting needs and other special requirements or purposes.

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

If bank stabilization is a concern, select fibrous deep-rooted plants.

Consider plants tolerant to sediment deposition and chemicals planned for application.

Rows of shrubs (Windbreak/Shelterbelt Establishment, 380) adjacent to field borders will often enhance field borders' ability to harbor beneficial insects, and may also provide additional wildlife benefits.

If installation or maintenance of the practice has potential of affecting cultural resources (archaeological, historic, historic landscape, or traditional cultural properties), follow NRCS state policy for considering cultural resources.

## PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for the practice site. Refer to FOTG Section IV – Range Planting (550) or Pasture and Hay Planting 512 and Herbaceous Vegetation Design Procedures (550DP) for requirements on establishment and selection of herbaceous vegetation.

Specifications shall be recorded on specification sheets, job sheets, Nebraska Conservation Planning Sheets, narrative statements in the conservation plan, or other acceptable documentation. The following items should be specified:

- Border widths and lengths based on local design criteria.
- Location within the field or farm boundary.

## OPERATION AND MAINTENANCE

Field borders require careful management and maintenance for performance and longevity.

The following O&M activities will be planned and applied as needed:

- Repair storm damage.
- Remove sediment - when 6 inches of sediment have accumulated at the field border/cropland interface.
- Shut off sprayers and raise tillage equipment to avoid damage to field borders.
- Shape and reseed border areas damaged by chemicals, tillage or equipment traffic.
- Fertilize, mow, harvest, and control noxious weeds to maintain plant vigor.

- Fill and reseed ephemeral gullies and rills that develop in the border.

Maintain herbaceous vegetation so that it provides at least 80% ground cover throughout the year.