

## NATURAL RESOURCES CONSERVATION SERVICE

### CONSERVATION PRACTICE STANDARD

#### FIELD BORDER

(feet)  
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

#### 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 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.

*Noxious weeds (as listed by the State of Hawaii) within the field border will be controlled.*

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

Plant materials, seedbed preparation, seeding rates, dates, depths, and planting methods will be consistent with approved local criteria.

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

*Field border establishment shall comply with local, state and federal regulations.*

##### Additional Criteria to Reduce Erosion from 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.

### **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, 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 or 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.

**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.

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

### **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.

## **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

To increase 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.

Consider using plant species that enhance the biomass collection opportunities.

Consider increasing the width of the field border will increase the potential for carbon sequestration.

## PLANS AND SPECIFICATIONS

Specifications for installation and maintenance of Field Border shall be prepared for each field or treatment unit according to the Criteria described in this standard and with the Practice Specification.

*The site-specific specifications shall be documented on the Field Border Jobsheet and given to the client. Other documents, such as practice worksheets, maps, drawings, and narrative statements in the conservation plan may be used to plan or design the practice and to prepare the site-specific specifications.*

*The site-specific specifications shall document the following, as a minimum:*

- Border widths and lengths based on local design criteria.
- Location within the field or farm boundary vegetation to be used.
- Site preparation.
- Planting method.
- Liming or fertilizer requirements.
- Operation and maintenance requirements.

## 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:
- Storm damage repair.
- Sediment removal - 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 reseeding border areas damaged by chemicals, tillage or equipment traffic.
- Fertilize, mow, harvest, and control noxious weeds to maintain plant vigor.
- Ephemeral gullies and rills that develop in the border will be filled and reseeded.

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