

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.

PURPOSES

This practice may be applied as part of a conservation management system to support one or more of the following:

- reduce erosion from wind and water;
- soil and water quality protection;
- management of harmful insect populations, or;
- provide wildlife food and cover.

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied at the edges of cropland fields and to connect other buffer practices within the field. It 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 will be established to adapted perennial species.

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

Plant material, 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.

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.

Plant stiff-stemmed, upright grasses *and/or shrubs* 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 other practice standards or 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

Plants that provide wildlife food and cover shall be used.

Mowing, harvest, and weed control activities within the field border will be scheduled to accommodate reproduction and other requirements of target wildlife species.

PLANNING 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.

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

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

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

Consider planting species that are tolerant to sediment deposition, and to pesticides which may be used in the cropping system.

Rows of shrubs (windbreak/shelterbelt, 380) planted adjacent to field borders will often enhance the potential of a field border to harbor beneficial insects, and may 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

Specifications for establishment and maintenance of this practice shall be prepared for each field or treatment unit according to the Criteria, Considerations, and Operation and Maintenance described in this standard.

Specifications shall be recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance).

- Storm damage repair - ephemeral gullies and rills that develop in the border will be filled and reseeded

- 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 re-seed border areas damaged by chemicals, tillage or equipment traffic
- Fertilize, mow, and harvest to maintain plant vigor
- Control noxious weeds

REFERENCES

USDA - Soil Conservation Service, Colorado, Agronomy Technical Note No. 59, Effectiveness of Soil and Water Conservation Practices for Pollution Control, July, 1980.

USDA - Soil Conservation Service, Colorado, Agronomy Technical Note No. 61, Seeding Rates, March, 1981.

USDA - Natural Resources Conservation Service, Colorado, Agronomy Technical Note No. 90, Seed Mix Recommendations, October, 1997.