

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
CONNECTICUT**

FIELD BORDER

(Ft.)

CODE 386

DEFINITION

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

areas, including the presence of any federally recognized noxious weeds or state recognized non-native (exotic, non-indigenous), invasive species.

PURPOSE

- Reduce erosion from water
- Protect soil and water quality
- Manage harmful insect populations
- Provide wildlife food and cover
- Increase carbon storage in biomass and soils.
- Improve air quality

Site specific field border widths shall be determined using best professional judgment specific to the purpose or purposes for installing the practice.

The minimum width of a field border on agricultural land uses shall be twenty (20) feet.

For all other land uses, the minimum field border width shall be ten (10) feet.

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.

Field borders will be established to adapted species of permanent grass, legumes, forbs and/or shrubs. Use of locally native plant species shall be encouraged.

On any land use where an assessment indicates that installation of this practice will meet the intended purpose(s).

Plant material, seedbed preparation, seeding rates, dates, depths, and planting methods will be consistent with Connecticut NRCS Standard 342, Critical Area Planting or as approved by the State Resource Conservationist.

On agricultural land, this practice applies when planned as a component of a conservation management system where soil loss is less than or equal to 2T and where a nutrient management plan and / or an integrated pest management (IPM) plan or wildlife habitat management plan has been implemented.

Natural regeneration may be an option for establishing vegetation on sites where seeds or rootstocks of desired species are present, and where an assessment indicates that the natural plant community will provide sufficient cover for the intended use of the field border. Natural regeneration is not a suitable option if there are significant site limitations (e.g. highly erodible soils, steep slopes, noxious weeds or other invasive species) which will inhibit establishment of the desired plant community.

On other land uses, this practice applies when planned as a component of an integrated pest management (IPM) plan or wildlife habitat management plan.

CRITERIA

General Criteria Applicable to All Purposes

Site conditions shall be assessed to determine surrounding land uses, soils, residual herbicides (to the extent known), available moisture during the growing season, and existing vegetation on the site and in adjacent

No federally recognized noxious weeds or state recognized non-native (exotic, non-indigenous), invasive species shall be used.

Ephemeral gullies and rills, or concentrated flow paths present in the planned border area will be smoothed as part of seedbed

preparation.

Livestock shall be excluded from all field borders.

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.

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.

Additional Criteria to Reduce Water Erosion

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.

If there is a concern that sediments or other sediment-adsorbed contaminants are leaving a field in runoff, use the Connecticut NRCS Standard 393, Filter Strip or the Connecticut NRCS Standard 391, Riparian Forest Buffer.

Promote infiltration of runoff by locating borders where concentrated water flows enter or exit a field.

Install borders to eliminate sloping end rows, headlands and other areas where concentrated water flows will enter or exit the field.

Install borders between water resources and certain recreational lands, residential yards or lawns to provide additional areas for infiltration.

Maintaining Field Setback Distances for Manure and Chemical Applications. Border widths will be designed to conform to setback widths established by state or local regulations.

Labels on pesticide and chemical containers may also be used to determine required setback distances from resources of concern.

Sediment Trapping. Where sediments or other sediment-adsorbed contaminants in runoff are a concern, use the Connecticut NRCS Standard, 393 Filter Strip below the source of contaminated runoff. Use a Field Border to protect the filter area or to accommodate maintenance.

Reducing Soil Compaction from Equipment Parking and Traffic. Border widths will be designed to accommodate equipment turning, parking, loading/unloading, harvesting operations, maintenance, or other activities.

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. Contact the University of Connecticut, Cooperative Extension System, Integrated Pest Management Program for information.

Additional Criteria to Provide Wildlife Food and Cover

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

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

Field borders for providing wildlife food and cover can also be established by cutting back forested areas along fields and recreational lands.

1. Remove most woody plants of 1" dbh or greater in a strip 20 to 30 feet wide. Irregular widths are desirable. Leave hollow trees and those with cavities for nesting animals. Girdle occasional large trees to kill without removal. Apple, cherry, and oak trees will not be removed unless thinning of these species is needed to improve fruit and nut production or provide diversity. A few evergreens are generally desirable for winter cover.
2. Maintain by re-cutting every 2 to 4 years, or when 50 percent of the vegetation reaches or exceeds 15 feet.
3. Encourage native shrub and herbaceous plants. Interplant with native shrubs and herbaceous plants adapted to soil conditions and meeting desires of landowners for wildlife food, cover and beautification. Some landowners prefer plants that produce occasional human food, such as raspberries, blackberries, high-bush cranberries, high-bush blueberries, crab apples, cherries, or other fruit bearing 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 reduce runoff velocity and promote infiltration, consider establishing a narrow strip of stiff-stemmed upright grass at the cropland and 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. Consider using grasses, legumes, shrubs, and native herbaceous plants that will furnish desired wildlife food and cover and beauty.

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

Field borders can be established by converting from trees to herbaceous vegetation and or shrubs.

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.

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

Rows of shrubs established 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 the potential of affecting cultural resources (archaeological, historic, historic landscape, or traditional cultural properties), follow Connecticut NRCS policy for considering cultural resources.

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

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

Plans and specifications shall be prepared for the practice site. The following items should be specified. Connecticut NRCS Conservation Job Sheet 386, Field Borders is available to document these items:

- Border widths and lengths are based on site specific local design criteria and required setbacks
- Location within the field or farm boundary, recreation land, yards and lawns
- Vegetation to be used
- Site preparation
- Planting or establishment method
- Liming or fertilizer requirements
- Operation and maintenance requirements
- Methods for assessment / monitoring of success

OPERATION AND MAINTENANCE

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

At a minimum, require annual inspections of the field border.

Job sheet(s) or site specific management plans shall be developed and provided to the client to assure performance of the practice as intended. At a minimum, the following components shall be addressed:

Vegetation in the Field Border

Describe what inspections are required to determine whether the desired vegetation is present in suitable quality, quantity, and distribution to meet the objectives of the practice.

Describe the extent of management needed to maintain vegetation in the desired species composition or age class (if applicable), or no management required (e.g. natural area).

Nuisance Plants and Animals

Describe the extent to which plant and animal pest species, including Federally recognized

noxious weeds or state recognized non-native (exotic, non-indigenous), invasive species.

Acceptable Uses

Describe the acceptable uses (e.g. grazing, hunting, nature preserve, etc.) and time of year / frequency of use restrictions, if any. Pay particular attention to cost-sharing program requirements as they relate to acceptable versus restricted uses and other management restrictions.

The following operation and maintenance items shall also be included in the plan as needed:

- Traffic on field borders shall be avoided when soil is wet.
- Storm damage shall be repaired in a timely manner.
- Field borders shall be protected from livestock grazing, fire, and herbicides.
- Sprayers shall be shut off and tillage equipment raised to avoid damage to field borders.
- Border areas damaged by sediment deposition, chemicals, tillage or equipment traffic shall be shaped and reseeded.
- Borders shall be fertilized according to soil tests, mowed, and harvested as necessary to maintain plant vigor.
- Ephemeral gullies and rills that develop in the border shall be filled, graded and reseeded
- Federally recognized noxious weeds or state recognized non-native (exotic, non-indigenous), invasive species shall be controlled.
- Maintain herbaceous vegetation so that it provides at least 80% ground cover throughout the year.