A Closer Look At

Field Buffers

Producers may be tempted to farm as many acres as possible. In some cases, planting corn and soybeans close to road ditches, fence lines, and water bodies can bring additional income. In the long-run, however, it may be beneficial for more farmers to turn their attention to field buffers, particularly in areas susceptible to erosion or unfit for production.

What are field buffers?

Field buffers are areas of vegetation planted to reduce erosion, minimize sediment and nutrient runoff, improve water quality, and enhance wildlife habitat. Typically placed near waterways and in areas subject to high erosion, field buffers consist of multiple plant species, including native varieties with hardy root systems.[1]

Letting roots run deep

Root systems and plant cover increase soil stability and strengthen the soil's resilience against winds and flowing water. By planting vegetative cover in highly erodible areas, field buffers provide essential protection against the loss of topsoil.

Reducing runoff

Field buffers are excellent at filtering nutrient, pathogen, and particulate runoff from fields. When placed along creeks and streams, the plant foliage and root systems provide a protective barrier that catches and absorbs excess nutrients and traps pathogens before they can reach the water.

Common types of field buffers

Field buffers come in many shapes and sizes. For best results, producers should work with local experts to develop conservation plans that meet the needs of a given farming operation and surrounding natural resources.

Field border: Field borders are strips of permanent vegetation established on one or more sides of the inside perimeter of a field. A mix of grasses, legumes, forbs, or shrubs, field borders are designed to be aesthetically pleasing and serve a multitude of wildlife.[2]

Contour buffer strip: Contour buffers are strips of perennial grasses and/or legumes alternated with wider cultivated strips that are farmed on the contour.[3]

Sources

1 "Conservation Practice Standard, Contour Buffer Strips, Code 332 (ac)." Natural Resources Conservation Service, U.S. Department of Agriculture, March 2017, efotg.sc.egov.usda.gov/api/CPSFile/24567/332_VT_CPS_(Con)tour_Buffer_Strips_2017. Accessed January 2024.

2 "Field Border (Ac.) (386) Conservation Practice Standard." Natural Resources Conservation Service, U.S. Department of Agriculture, nrcs.usda.gov/resources/guides-and-instructions/field-border-ac-386-conservation-practice-standard. Accessed January 2024.

3 "Contour Buffer Strips (Ac.) (332) Conservation Practice Standard." Natural Resources Conservation Service, U.S. Department of Agriculture, nrcs.usda.gov/resources/guides-and-instructions/contour-buffer-strips-ac-332-conservation-practice-standard. Accessed January 2024.

Riparian forest buffer: Riparian forest buffers are established by planting trees and shrubs along waterways and water bodies to reduce the transport of contaminants such as sediment and pesticides into surface water and groundwater.[4]

Filter strip: Filter strips are areas of grass and other native vegetation planted adjacent to streams, wetlands, lakes, and ponds to protect water quality. This vegetation serves as a natural filter and helps stabilize cropland susceptible to water and wind erosion.[5]

Benefits of field buffers

Producers establish field buffers for a variety of reasons. While one producer may seed a buffer as a filtration system for runoff, another may be invested in establishing wildlife habitat and recreation opportunities. Regardless of motivation, field buffers provide important benefits that serve producers and the community at large.

- Helps soil retain water
- Improves carbon sequestration
- Improves soil structure
- Improves water quality
- Increases organic matter
- Increases wildlife habitat
- Reduces erosion
- Reduces runoff
- Reduces water pollution

Watch a video about field borders at rb.gy/sq62hj and a video about filter strips at rb.gy/w667by.

How to get started

The U.S. Department of Agriculture's Natural Resources Conservation Service supports field buffers through the Conservation Stewardship Program and the Environmental Quality Incentives Program, which provide producers with technical and financial assistance. In addition, the Farm Service Agency supports field buffers through the Conservation Reserve Program. To find your local office, visit offices.sc.egov.usda.gov/locator/app.

Sources

4 "Riparian Forest Buffer (Ac.) (391) Conservation Practice Standard." Natural Resources Conservation Service, U.S. Department of Agriculture, nrcs.usda.gov/resources/guides-and-instructions/riparian-forest-buffer-ac-391-conservation-practice-standard. Accessed January 2024.

5 "Conservation Reserve Program." U.S. Department of Agriculture, Farm Service Agency, fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2015/CRPProgramsandInitiatives/Practice_CP21_Filter_Strip.pdf. Accessed January 2024.

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