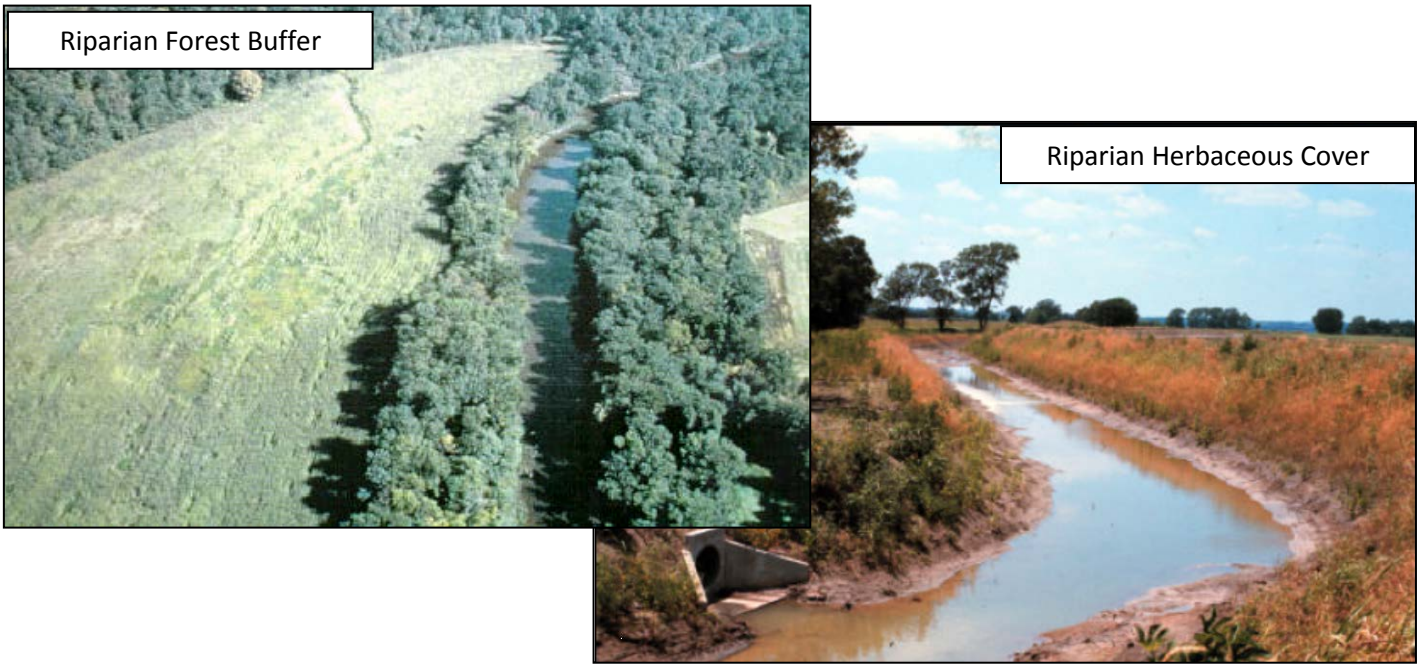
BALANCING FOOD SAFETY AND SUSTAINABILITY

Opportunities for Co-management - Vegetated Practices near Streams

*This is one of a series of resource sheets for **food safety auditors** that describe conservation practices commonly used in agriculture's production environment.*



Images of Riparian Forest Buffer[1], Riparian Herbaceous Cover[2] near streams adjacent to production fields

This information will help you to

Recognize Vegetated Practices near Streams in the agricultural landscape.

Understand the purposes Vegetated Practices near Streams serve in the agricultural landscape.

Recognize the language growers may use to explain why these practices are important in their production environment.

Understand when audit standards may consider these practices as addressing farming impacts on the environment and biodiversity and/or as potential contributors to food safety risk.

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[1] This practice is currently listed as Riparian Forest Buffer #391 by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Some states may include additional guidance; consult your local NRCS field office.

[2] This practice is currently listed as Riparian Herbaceous Cover #390 by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Check website for latest standard information.

Vegetated practices near or adjacent to streams are employed to establish, maintain, or restore vegetation. Riparian vegetation performs many functions important to streams and ponds such as shoreline and streambank stability, fish and wildlife habitat, and water quality protection. Riparian buffers of sufficient width intercept sediment, nutrients, pesticides, and other materials in surface runoff and reduce nutrients and other pollutants in shallow subsurface water flow. Woody riparian vegetation in buffers provides additional food and cover for wildlife, helps lower water temperatures by shading the stream or waterbody, and slows out-of-bank flood flows. Selection of native plant species is recommended.

Riparian Forest Buffers are field margins consisting of trees, shrubs, and herbaceous plants adjacent to and up-gradient from waterbodies. They enhance the riparian habitat by shading the waterbody and protecting it from excess amounts of sediments, organic materials, pesticides, and other pollutants in surface runoff. Tall woody vegetation and low growing grasses are combined to provide a minimum of a 35-foot wide buffer between cropland and the waterbody.

Riparian Herbaceous Cover - Non-woody vegetation cover is established or managed cover in the transitional zone between terrestrial and aquatic habitats. Where low growing vegetation is more appropriate for bank protection, this practice is used to improve water quality and quantity, establish and maintain habitat corridors, and to increase net carbon storage in the biomass and soil. Grasses, grass-like plants and forbs are planted to protect and enhance the riparian ecosystems that occur along streams. To minimize crop shading and reduce risk of obstructed flows, this practice uses only low growing perennial plant varieties.

Advantages	Disadvantages
Characteristics shared by practices	
• Provides protection against erosion caused by flood waters within the flood plain and/or reduces erosion and provides stability to streambanks and shorelines • Improves water quality by filtering sediment and other pollutants • Improves habitat and/or provides food source for wildlife and aquatic organisms • May provide habitat for raptors and beneficial insects	• May provide habitat for rodent or bird pests • May remove land from crop production
Riparian Forest Buffer	
• Restores riparian corridor vegetation • Creates shade, which lowers water temperatures and improves habitat for fish and other aquatic organisms	• Mature vegetation may shade cropland
Riparian Herbaceous Cover	
• Enhances desired plant communities • Provides habitat for native wildlife and aquatic organisms • Restores riparian corridor vegetation • May provide habitat for beneficial insects • Enhances pollen, nectar, and nesting habitat for pollinators • Increases water storage of floodplains	• Does not provide as much woody debris for in-stream habitat for fish • Provides less shading and protection from excess flows than Riparian Forest Buffer

[1]From Farm Water Quality Management Practice Sheets Riparian Forest Buffer #391; Riparian Herbaceous Cover #390

In some audit standards these practices may help producers to demonstrate knowledge of the impacts of farming on the environment, including water quality impairments from sediments, pesticides and nutrients. These

practices may also demonstrate efforts to maintain biodiversity. They may trigger concerns about animal activity, fecal contamination, or proximity to habitat for wildlife, and/or water of unknown quality.

Scenarios

Buffers are created between cropped areas and flooding from riparian areas with adequate room to turn equipment without possible contamination. Distances are based on commodity specific guidance or risk analysis by a food safety professional.

Additional Resources

Balancing Food Safety and Sustainability: Opportunities for Co-management, 2012

Additional resources on co-management of food safety and sustainability may be found at on the UC Food Safety Website under the Pre- and Post-Harvest Produce link. You can also contact Mary Bianchi, UC Cooperative Extension Emeritus Farm Advisor in San Luis Obispo County at mlbianchi@ucanr.edu.