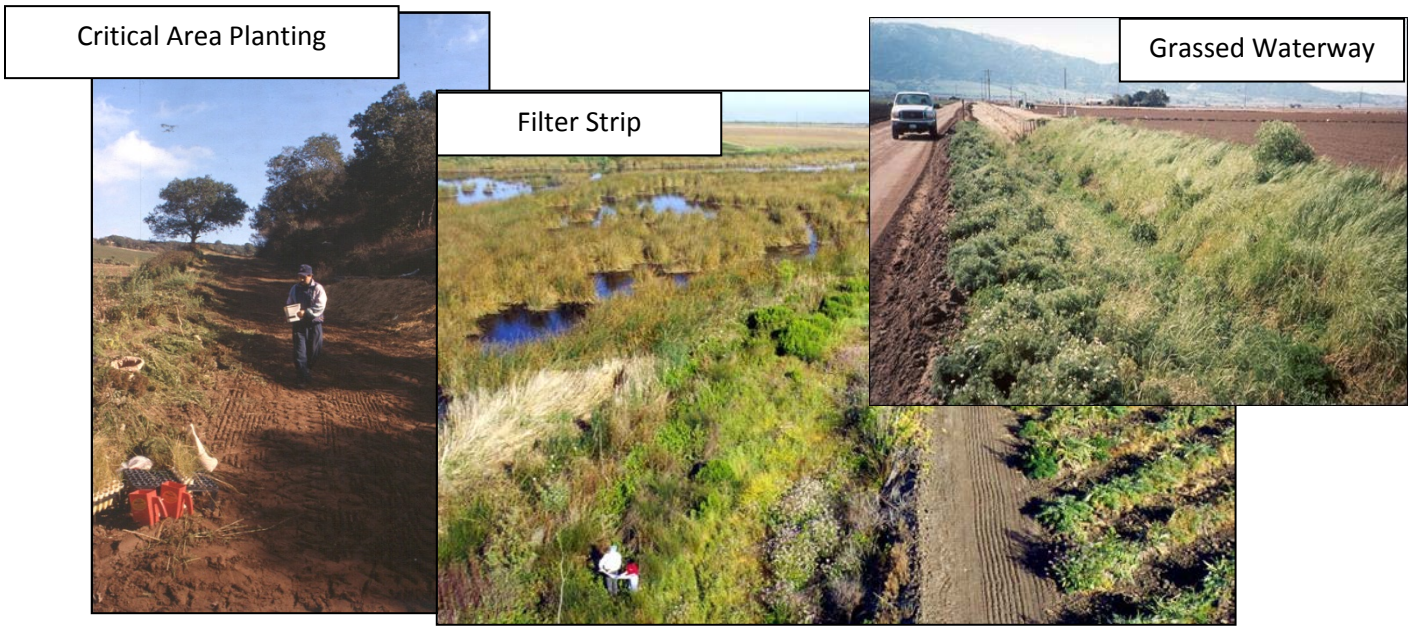
BALANCING FOOD SAFETY AND SUSTAINABILITY

Opportunities for Co-management - Vegetated Practices Adjacent to Fields

*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 Critical Area Planting[1], Filter Strip[2], and Grassed Waterway[3] in the production environment

This information can help you to

Recognize vegetated practices in the agricultural environment.

Understand the purposes vegetated practices serve in the agricultural environment.

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 Critical Area Planting #342 by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Check website for latest standard information.
[2] This practice is currently listed as Filter Strip #393 by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Check website for latest standard information.
[3] This practice is currently listed as Grassed Waterway #412 by the USDA Natural Resources Conservation Service. The NRCS National Practice Standards are updated regularly. Check website for latest standard information.

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Vegetated practices are planted in the agricultural environment, generally adjacent to field production areas. They are employed to prevent soil erosion, safely convey water, and reduce or capture sediments or other pollutants from both crop and livestock production areas as well as disturbed areas adjacent to production. Commonly used vegetated practices include critical area plantings, filter strips, and grassed waterways. Species selection is carefully considered to minimize impacts to crops. Native plants are encouraged. Vegetated practices may remove land from production, and there are costs associated with planting and maintenance of critical area plantings, filter strips, and grassed waterways. Guidelines for growers on establishing vegetated practices are available.

Critical area plantings use established vegetation in disturbed areas and areas subject to severe erosion. A combination of trees, shrubs, vines, grasses, and legumes are commonly used. Plants selected are typically long-lived perennials but annuals may be appropriate for frequently disturbed sites such as farm roads.

Filter strips are areas of vegetation adjacent to cropland that remove sediment and pollutants from runoff and waste water through filtration. This practice can be applied to cropland at the lower edge of fields, above conservation practices such as terraces and diversions, or on fields adjacent to waterways. Width of the filter strip is determined by site-specific factors.

Grassed Waterways are natural or constructed channels that are shaped or graded to required dimensions and established in suitable vegetation for the stable conveyance of concentrated runoff. The purpose is to convey runoff from terraces, diversions, or other water concentrations without causing erosion or flooding in the waterway. Grassed waterways only reduce erosion caused by drainage water flowing through the channel and do not effect erosion coming off the fields.

Advantages[1]	Disadvantages
Characteristics shared by practices • Improves water quality by filtering pollutants • Reduces soil erosion from non-crop areas • Protects area below the practice from excess sediment and polluted runoff • May decrease maintenance costs associated with repairing erosion • May enhance wildlife habitat, especially if native species are used	• May require irrigation, mowing, weed control, and/or fertilization • May remove acreage from production although these are typically installed in concentrated flow areas that are not the most highly productive parts of a field.
Critical Area Plantings • Decreases damage to crops below planted area • May serve as a refuge for beneficial insects	
Filter Strips • Captures sediments from upslope land use • Potential to capture nutrients and pesticides from upslope land use	
Grassed Waterway • May filter contaminants • Reduces soil erosion in channel	

[1]From Farm Water Quality Management Practice Sheets Critical Area Planting #342; Filter Strip #393; Grassed Waterway #412

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 sediment, nutrients, and/or pesticides as well as providing control of fugitive dust. Depending on the practice, they may also demonstrate efforts to maintain biodiversity. They may trigger concerns about animal, fecal contamination, proximity to habitat for wildlife, or water of unknown quality.

Scenarios

Critical Area Planting – Cropped areas adjacent to critical area planting are included in routine monitoring for fecal contamination and/or animal activity and/or potential for surface flow of water carrying fecal matter into cropped area.

Filter Strips and Grassed Waterways – Cropped areas adjacent to vegetation are included in routine monitoring for fecal contamination and/or animal activity.

Additional Resources

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

Vegetative Filter Strips for Nonpoint Source Pollution Control in Agriculture, 2006

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.