



Filter Strips

Planting or maintenance of a dense grass sod in strips can protect water quality by filtering sediment, nutrients and other chemicals before reaching surface water resources. These filter strips serve as a border between cropland and land designated for other uses. Not only do filter strips help producers manage surface runoff, but they also provide a habitat for wildlife.

Filter strips are beneficial in a number of sites typically found on farms. The lower edges of row crop fields, particularly those fields that are adjacent to intermittent or perennial streams, farm ponds or lakes are a good location for a filter strip. Filter strips can also be used in the area directly below an animal waste management system. Vegetative strips also control runoff from logging operations and serve as a good border between a logging area and a stream, pond or lake. Filter strips can also be used within a crop field as parallel strips between row crop strips.

Filter strips capture sediment particles, which often carry pesticides and other nutrients, rather than allowing them to flow into surface waters during periods of heavy runoff. When water becomes overloaded with nutrients, algal blooms can form. These blooms rob oxygen from fish and other stream life. Filter strips may also decrease nutrients entering the ground water system through increased plant uptake.

Vegetation growing in these filter strips can also provide food and cover for wildlife. Filter strips can provide nesting sites which may be lacking in a particular area. The filter strips serve also as travel corridors for wildlife between shelter areas and food supply areas.

The Kentucky Agriculture Water Quality Authority recommends the use of filter strips in the following situations or areas:

- ! row crop farming on hill ground
- ! row crop farming on bottom ground
- ! fields that receive animal, agriculture, or industrial/municipal waste
- ! crop fields adjacent to streams or lakes
- ! in orchards or Christmas tree farms
- ! along fields for turf grass production

Filter strips are also recommended for livestock operations with the following situations:

- ! livestock on confined/*paved* feeding areas
- ! livestock on confined/*unpaved* feeding areas
- ! livestock in pasture areas with concentrated or heavy use

The Cabinet for Natural Resources and Environmental Protection has prepared a manual, *Best Management Practices for Agriculture*, that can provide you with design and construction details for filter strips.

Like all other best management practices, filter strips must be maintained to be an effective method of protecting water quality. Filter strips can range from 10' to over 100' wide for cropland and waste management areas depending on the slope length and percent slope. Filter strips are most effective, however, on slopes of 5% or less. Soil samples should be taken to determine the lime and fertilizer needs to obtain desired yields and maintain adequate growth. Other management suggestions for filter strips include:

- ! Periodic mowing to eliminate woody plants
- ! Avoid using filter strips as roadways for farm vehicles
- ! Minimize drift when applying herbicides to surrounding cropland
- ! Control graze filter strips only when the strip is dry and firm.

Sources:

Agriculture Water Quality Act Producers Workbook, Division of Conservation, Kentucky Natural Resources & Environmental Protection Cabinet (KNREPC)
Field Borders and Grassed Waterways, USDA Water Quality Demonstration Project Area
Kentucky Best Management Practices for Agriculture, KNREPC
Kentucky Agriculture Water Quality Plan, Division of Conservation, KNREPC

Written by: Jennifer Cocanougher, Extension Associate for Environmental & Natural Resource Issues.

The Kentucky Agriculture Water Quality State Plan minimum requirement for Filter strips is:

Maintain an adequate strip width to remove sediment, organic matter, and other pollutants from run-off and wastewater.

Further recommendations regarding the installation and maintenance of filter strips can be found in the Kentucky Agriculture Water Quality Plan and in *AGR-97 Surface Water Management Systems* available from your local County Extension Office or County Conservation District office.

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