JOB SHEET Contour Buffer Strips

Oklahoma Conservation Practice Job Sheet ***332 01***

USDA Natural Resources Conservation Service (NRCS) **August, 2015**

Landowner_____

WHAT ARE CONTOUR BUFFER STRIPS?

Contour buffer strips are strips of perennial vegetation alternated down the slope with wider cultivated strips that are farmed on the contour. Contour buffers strips are narrower than the cultivated strips. Vegetation in strips consists of adapted species of grasses or a mixture of grasses and legumes.

PURPOSES

Contour buffer strips can significantly:

- reduce sheet and rill erosion.
- reduce the transport of sediment and other water-borne contaminants downslope.
- Increase water infiltration.

HOW IT HELPS THE LAND

Contour buffer strips established on the contour of a slope can significantly reduce sheet and rill erosion. The strips slow runoff and trap sediment. As runoff passes through the buffer strip, sediment, nutrients, pesticides, and other contaminants are trapped in the strip and removed from the runoff water. They can also provide food and cover for wildlife.

WHERE THE PRACTICE APPLIES

Contour buffer strips are used on cropland subject to sheet and rill erosion. These narrow strips of permanent vegetation are not part of the normal crop rotation. Contour buffer strips are also an excellent filter for runoff and will help improve surface water quality. The practice is more difficult to establish on undulating to rolling topography because of the difficulty of maintaining parallel strip boundaries across the hill slope or staying within row grade limits.

Requirements for establishing contour buffer strips include a minimum buffer strip width, with strips placed along the contour and farming operations that follow the approximate contour grade. Cultivated strip widths are determined by such variables as slope, soil type, field conditions, climate, and erosion potential. Cultivated strip widths may be adjusted to accommodate machinery widths. Buffer strips can be used as turn areas if care is taken to minimize disturbance to soil and vegetation. Waterways or diversions are needed where runoff collects and concentrated flow erosion is a problem. Contour buffer strips can be established between terraces to enhance treatment of the hill slope. A ratio of cultivated width to buffer strip width of between 9:1 and 4:1 is desirable. For reducing sheet and rill erosion, buffer strip width must be at least 15 feet for grasses or grass-legume mixtures and at least 30 feet for legumes alone.

WHERE TO GET HELP

For assistance in planning contour buffer strips, contact your local Natural Resources Conservation Service or Conservation District Office.

APPLYING THE PRACTICE

Contour buffer strips are normally established as part of a resource management system for a conservation management unit. They are generally used in conjunction with other practices such as residue management, conservation crop rotation, terraces, and/or contour farming. The crop strip widths are determined by such variables as slope, soil type, field conditions, climate, and erosion potential. Vegetative species to use for contour buffer strips depend on soil types and climate. The following grass species can be used in contour buffers: native mixtures, bermudagrass, tall fescue, tall wheatgrass, old world bluestem, big bluestem, sand bluestem, indiangrass, switchgrass, and alfalfa

Wildlife

When using for wildlife, adjust contour buffer strip widths and plant species to meet the needs of the target wildlife species. Increase widths to 30 feet or more depending on the requirements for nesting and escape cover of the target wildlife species. Avoid mowing during nesting periods.

OPERATION AND MAINTENANCE

Mow buffer strips to maintain appropriate vegetative density and height for trapping sediment. Fertilize buffer strips according to soil test results. Spot seed or renovate buffer strip areas damaged by herbicides, equipment, or unusual rainfall events. Redistribute sediment accumulations as needed to maintain uniform sheet flow along the crop-strip boundary.

Buffer strips can be alternated with crop strips when renovation is needed to maintain their relative position on the hill slope. Cultivated strips and buffer strips should be rotated so that a mature stand of vegetative cover is maintained during the establishment period of the new buffer strip. New buffer strips should be established immediately below or above the existing buffer strip before removing it to plant a crop.

SPECIFICATIONS

Site-specific requirements are listed on the specifications sheet below.

CONSIDERATIONS

Where contour row curvature becomes too sharp to keep equipment aligned with rows during field operations, increasing the buffer strip width can help avoid sharp ridge points. In drainage ways, establishing grassed waterways at least up to the point of sharp curvature can allow the equipment to be lifted and/or turned to meet the same rows across the turn strip.

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