



Contour Buffer Strips and Where They Apply

Contour buffer strips are narrow strips of permanent, herbaceous vegetative cover established across the slope as close to the contour as possible. They are alternated down the slope with parallel, wider cropped strips. This conservation practice is most effective for reducing soil erosion on uniform slopes ranging from four to eight percent, and where conventional planting practices are followed.

Advantages of Establishing A Contour Buffer Strip System

The most significant advantage is that permanent vegetative markers are established in the field to allow all cultural operations associated with the cropping system to be performed on the contour. In most cases, this alone will cut soil loss by as much as 50 percent. Sediment, nutrients, pesticides, and other contaminants are removed from the runoff as they flow through the vegetated buffer strips.

The strips also provide good access lanes through the field to allow for crop inspections, laying of irrigation pipelines, and so on. Wildlife food and nesting cover can be provided if the strips are established to specific grass and legume species or mixes.

Requirements For Establishing Contour Buffer Strips

To achieve a substantial reduction in soil loss, at least 90 percent of the crop area shall have rows within a maximum grade of one-half percent on field slopes of three percent or more. Row grades can not exceed an amount equal to one-half of the field slope percent when field slopes are less than three percent.

NOTE: Row grade percent or field slope percent refers to the vertical change in feet for every 100 feet of horizontal distance.

The width of buffer strips at their narrowest point shall be no less than 15 feet when established to grasses or grass/legume mixtures and no less than 30 feet when legumes are used alone.

Crop strips are of even widths, and their widths are determined by variables such as slope landscape, slope length and slope percent. The determined crop strip width may be adjusted to the nearest multiple width of planting implements used in the field.

Stable Outlets

All runoff from contour buffer strip systems shall flow to stable outlets. Stable outlets include grassed waterways, terraces, diversions, sediment basins, field borders, filter strips and other similar measures.

Considerations

Landowners may want to consider the possibility of removing obstructions in the fields or changing field boundaries prior to installing contour buffer strip systems. This will create a more effective system and will improve the farm equipment operation and efficiency. (Special attention should be given to *avoid removal* of critical wildlife habitat.)

Additional planning and considerations should be given to establishing any permanent vegetative strips to grasses and/or legume species or mixes to encourage or enhance desired wildlife species and their needs.

Any correction strips that are needed and planned for hay should be wide enough to accommodate harvesting equipment.

In areas of concentrated flow or defined drainage patterns, waterways or other conveyances may be needed to prevent erosion.

Field borders and/or filter strips should be considered at the end of the strips and at the lower edge to receive and handle any diverted surface runoff. These areas should be planned or permanent vegetation for use as hay or wildlife habitat.

Permanent vegetative strips may be considered as well through the field to permit readjustment of row layout. This may be necessary on ridge tops or irregular slopes to realign row patterns to accommodate farm equipment for planting, tillage, and harvesting.

Additional conservation practices may need to be used in combination with the contour farming practice to meet the goals of the conservation management system.

Operation and Maintenance

Conduct all cultural operations on the crop strips parallel to the up slope boundary of each respective vegetated strip.

The buffer strips should be evaluated within several months of seeding. If establishment rate of vegetative cover is 50 to 80 percent, apply additional seed during the next optimum seeding period, preferably with a no-till drill. If establishment rate is less than 50 percent, reseed in accordance with original planting plan. A no-till drill is also recommended in this situation unless smoothing of rills and/or seedbed preparations are necessary. NOTE: Native Warm Season Grasses may require two growing seasons to become established, so allow more evaluation time.

Maintain width of contour buffer strips in accordance with original design and layout. Any encroachment due to cultural operations should be corrected, and necessary re-establishment performed at the first optimum seeding period after crops have been harvested.

Once established, inspect buffer strips periodically for damage caused by erosion, drought, livestock, herbicides, etc. Any damage should be promptly corrected by performing necessary repairs and/or by conducting reseeding operations. NOTE: Use caution when spraying herbicides on adjacent crop strips.

Soil test every three to four years, and apply needed lime and fertilizer on the buffer strips to maintain a vigorous and dense growth of vegetative cover.

Control weeds and woody growth on vegetated buffer strips by appropriate methods. Time mowing of buffer strips to maintain vegetative density and height for optimum trapping of sediment from the upslope cropped strip during the critical erosion period. For wildlife benefits, do not mow during the nesting season (April 1 - August 15). NOTE: Do not leave a stubble height of less than eight inches when cutting native warm season grasses.

Sediment which accumulates along the upslope boundary of the buffer strip should be redistributed over the cultivated strip when needed to maintain uniform sheet flow across the vegetated strip. If sediment accumulates just below the upslope edge of the buffer strip to a depth of six inches, or vegetative ground cover falls below 65 percent in the buffer strip due to sediment, relocate the buffer/cropped strip interface location.

Periodically inspect, and adequately maintain grassed waterways, field borders, filter strips, turn strips, or other measures used to receive and convey runoff from the field, and/or used to facilitate equipment operation.

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Contour Buffer Strips - Specifications Sheet

Landowner _____ Tract Number _____ Field # _____

Sketch of Contour Buffer Strip System

Planned Rotation _____

Buffer strip layout	Buffer Strip 1	Buffer Strip 2	Buffer Strip 3
Buffer strip #			
Strip width (ft.)			
Strip length (ft.)			
Acres in buffer			
Acres of Up-slope Cultivated Strip			
Slope %			
Species #1			
Species #2			
Species #3			
Seeding Date			
Seeding rate (PLS) (lbs/acre)			
Total Seed (lbs)			
Estimated Acres			
Lime (tons/acre) (rates based on current soil test)			
N (lbs/acre)			
P ₂ O ₅ (lbs/acre)			
K ₂ O(lbs/acre)			

Site Preparation

Prepare a weed-free, firm seedbed. Apply lime and fertilizer (in accordance with a current soil test) at time of seedbed preparation, and incorporate into the top 3 to 6 inches of soil.

Planting Methods

Drill grass and/or legume species or mixes _____ inches deep uniformly over the area. May include small grain or a summer annual as a nurse crop at the rate of _____ pounds per acre. Note: Clip or harvest the nurse crop before it has an adverse effect on the growth of the permanent species.