NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

CONTOUR STRIPCROPPING

(Acre)

CODE 585

DEFINITION

Growing row crops, forages, small grains, or fallow in a systematic arrangement of equal width strips on or near the contour of the field slope.

PURPOSES

- To reduce sheet and rill erosion
- To reduce transport of sediment and other water-borne contaminants

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on sloping land where crops are grown.

The practice is not well suited to rolling topography having a high degree of slope irregularity.

CRITERIA

General Criteria Applicable to All Purposes

Arrangement of Strips

Alternate strips of row crops with grass and/or legume crops. No two adjacent strips shall be in row crops at the same growing season. However, two adjacent strips may be in a grass and/or legume crop at the same time.

Alignment of Strips

Where more than one strip boundary will be placed on the hill slope, strip boundaries shall run parallel to each other as long as their grades meet the row grade criteria. If unachievable, establish a new baseline at a distance up or down the slope equal to some multiple of strip widths that will limit the number of correction strips to the minimum needed to keep all strip boundaries within row grade limits.

All tillage and planting operations will follow the contour line established.

Where contour row curvature becomes too sharp to keep machinery aligned with rows during field operations, establish sod turn strips on sharp ridge points. These strips shall be wide enough to allow the equipment to be lifted and/or turned and meet the same rows across the turn strip. Mow sod turn strips and *grassed waterways* at least once yearly after ground-nesting birds have hatched.

Level of Erosion Control

Erosion control will meet the acceptable soil erosion level. It shall be determined by approved erosion prediction technology, accounting for the effects of other conservation practices. Soil loss will be documented in the conservation plan.

Strip Width

Base strip widths on the slope length used for erosion prediction. Strip widths shall not exceed 50 percent of the slope length or 150 feet whichever is less. The strips shall be of equal width.

Row Grades

The row grade shall be aligned as closely as possible to the contour to achieve the greatest erosion reduction. The maximum grade of rows shall not exceed 2 percent.

Row grades for soils with slow to very slow infiltration rates (soil hydrologic groups C or D), or for crops sensitive to ponded water shall be designed with positive row drainage of not less than 0.2.

A contour stripcropping layout shall not occur on a slope longer than the critical slope length unless supported by other practices that reduce slope length below critical (e.g., diversions, terraces). The computation of critical slope length shall be determined using approved erosion prediction technology.

Stable Outlets

All runoff from *contour stripcropping* shall be delivered to stable outlets, such as *grassed waterways, field borders, water and sediment control basins, or underground outlets for terraces and diversions.*

Headlands/End Rows

Keep headlands/end rows in permanent sod where their slope is steeper than 2 percent.

CONSIDERATIONS

The *conservation crop rotation* on stripcropped fields should be consistent with the farm enterprise crop mix and/or associated livestock operation. These will influence the proportion of row crops, close growing crops, and meadow crops.

To avoid wide fluctuations in acreage of different crops from year to year, fields having identical crop rotations can be set up that are nearly equal in size and have offset years of rotation commencement. The number of fields needed to produce a nearly constant acreage of each crop for each year in the rotation is equal to one half of the years in the rotation. Even-year rotation lengths are preferable to odd-year rotation lengths for ease of design.

Protect areas of existing or potential concentrated flow erosion by any one or more suitable conservation practices, such as *grassed waterways, water and sediment control basins, diversions, terraces, or underground outlets*.

Flag baseline(s) and have farmer immediately plow or disk to be used as a reference.

Design and install the strip layout to best facilitate operation of all machinery used on the strips. To avoid point rows and partial machine passes, lay out strip widths to have some multiple of full width passes by all farm implements.

Prior to design and layout, *obstruction removal* or changes in field boundaries or shape should be considered, where possible and feasible, to improve the effectiveness of the practice and the ease of performing field operations across the slope.

Prior to layout, inspect the field to find key points for commencing layout or getting a full strip width to pass by an obstruction or ridge saddle. Whenever possible, run the strip boundary parallel with fence lines or other barriers, as long as row gradient criteria are met. Account for access road widths when they must cross the field, and adjust the strip boundary on either side accordingly.

When the slope length used in erosion prediction exceeds the critical slope length for the field to be contour stripcropped, establish structures, such as *diversions* to reduce slope length below the critical slope length.

Retaining as much crop residue as possible on the soil surface by using residue management practices can maximize critical slope lengths.

PLANS AND SPECIFICATIONS

The following specification will be provided to the client and documented in the conservation plan:

- Arrangement of strips for a rotation by crop and year.
- Location of the baseline.
- Location of sod turn strips, grass waterway diversions or other support practices.
- Strip width for crops and correction strips.
- Location of headland/end row.
- Tillage and planting operations direction.
- Mowing date(s) of grass turn strips, waterways and diversion.

OPERATION AND MAINTENANCE

Conduct all farming operations parallel to the strip boundaries except on end rows that have gradients flatter than the criteria set forth in this standard.

Substituting a crop different from one called for in the planned crop rotation, or adjusting the crop rotation due to failed crops or loss of stand, is acceptable, provided neither situation allows two adjacent erosion-prone strips.

Sediment accumulations along the upslope edge of protected strips may need to be smoothed or redistributed to maintain uniform sheet flow along the strip boundary.

When headlands/end rows are in permanent cover, renovate as needed to keep ground cover above 70 percent. No-till renovation of headlands/end rows is recommended but in any case should only include the immediate seedbed preparation and reseeding to a sod-forming crop with or without a nurse crop. Maintain full headland/end row width to allow turning of farm implements at the end of a tilled strip to double back on the same strip.