

NATURAL RESOURCES CONSERVATION SERVICE
MONTANA CONSERVATION PRACTICE SPECIFICATION**STRIPCROPPING (ACRE)****CODE 585**

DEFINITION: Growing row crops, forages, small grains, or fallow in a systematic arrangement of equal width strips across a field.

PURPOSE: The purpose of the stripcropping practice is to reduce soil erosion from water and transport of sediment and other water-borne contaminants, to reduce soil erosion from wind, and to protect growing crops from damage by wind-borne soil particles.

CONSERVATION MANAGEMENT SYSTEM

Stripcropping is established as part of a conservation management system to address the soil, water, air, plant, animal, and human needs as related to the owner's goals and objectives. It is important to consider crop rotation, nutrient and pest management, geologic characteristics of the land, and other supportive conservation practices when designing a stripcropping system.

Number of Strips.

A stripcropping system shall consist of two or more strips. All tillage and planting operations should follow the strip line established.

Vegetative Cover.

Vegetation in a stripcropping arrangement consists of crops and/or forages grown in a planned rotation. No two adjacent strips shall be in an erosion-susceptible condition at the same time during the year. However, two adjacent strips may be in erosion-resistant cover at the same time. Erosion-resistant strips shall be crops or crop residues that provide the needed protective cover during those periods when erosion is expected to occur.

Acceptable protective cover includes a growing crop, including grasses, legumes, or grass-legume mixtures, standing stubble, residue with enough surface cover to provide protection, or surface roughness sufficient to provide protection. A vegetative cover shall be selected that is tolerant of the anticipated depth of sediment deposition.

When the erosion-resistant strip is in permanent vegetation, the species established shall either be tolerant to herbicides used on the cropped strips or protected from damage by herbicides used on the cropped strips.

Width of Strips.

The required width of strips shall be determined using currently approved erosion prediction technologies to achieve the planned erosion reduction (RUSLE2 or WEQ).

Where field contours become too sharp to keep machinery aligned with the contour 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.

Arrangement and Vegetative Condition of Strips.

Strips susceptible to erosion shall be alternated down the slope with strips of erosion-resistant cover. Erosion-susceptible strips are generally defined as consisting of row crops or fallow with less than 10 percent surface residue cover and little surface roughness during the period of time when erosion potential is the greatest. An erosion-resistant strip generally consists of dense grasses and/or legumes, hay crops nearing the end of the first year, or row crops with surface cover greater than 75 percent during the period of time when erosion potential is the greatest. In conditions where little surface cover is present, surface roughness will be considered erosion resistant if roughness depressions are at least 7 inches in depth during the period of time when erosion potential is the greatest.

Minimum Row Grade.

Row grades for soils with slow to very slow infiltration rates (soil hydrologic groups C or D), or for crops sensitive to ponded water conditions for periods of less than 48 hours, shall be designed with positive row drainage of not less than 0.2 percent on slopes where ponding is a concern.

Specification MT585-2

Maximum Row Grade.

The row grade shall be aligned as closely as possible to the contour to achieve the greatest erosion reduction, but still be practicable to operate equipment.

The maximum grade of rows shall not exceed 5 percent or 0.50 times the up and down hill slope percent used for erosion prediction, whichever is less.

Minimum Ridge Height.

The ridge height shall be sufficient to reduce soil erosion compared to rows oriented up and down the slope. As a minimum, this practice shall create at least a 0.5 to 2-inch ridge height during the period of the rotation that is most vulnerable to soil erosion. The required ridge height will be determined using on-site conditions and current erosion prediction technology.

The minimum ridge height is not required for strips of close-grown crops, such as small grains or meadow. The minimum ridge height is not required where the practice *residue management, no-till/strip-till* is used parallel with the strip boundaries if at least 50 percent surface residue is present between the rows after planting.

Critical Slope Length.

The computation of critical slope length shall be determined using approved water erosion prediction technology. When *stripcropping* is applied in conjunction with *contour farming*, the critical slope length is 1.5 times the critical slope length determined for *contour farming*. A 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).

Stable Outlets. Stable outlets shall be established as necessary where runoff results in concentrated flow erosion. Acceptable stable outlets include *grassed waterways, field borders, filter strips, water and sediment control basins, or underground outlets for terraces and diversions*.

Headlands/End Rows. On fields where row crops and tillage are a part of the rotation, headlands/end rows with a slope steeper than the maximum allowable row grade for that field shall be maintained in permanent sod or planted using *residue management, no-till/strip-till*.

WILDLIFE

Properly designed stripcropping can also provide food and escape cover for wildlife. Stripcropping can enhance wildlife objectives depending on the crop species and management practiced. Consider using species or residue that can provide food and cover for important wildlife.

OPERATION AND MAINTENANCE:

Perform all tillage and planting operations parallel to the contour baselines maintaining established strip widths provided the applicable row grade criteria are met. Where field operations begin to converge between two non-parallel contour strips, establish a correction line or area that is either permanent sod, or established to an annual close-grown crop. Where contour strips become too sharp to keep machinery aligned with rows during field operations, establish sod turn strips on sharp ridge point or other odd areas. Renovate field borders as needed to maintain at least 65 percent ground cover. Damaged area should be repaired and or revegetated. Sediment accumulations should be redistricted as needed to maintain uniform sheet flow through the strip width.