United States Department of Agriculture

Natural Resources Conservation Service

Stripcropping
Wisconsin Job Sheet 585

Landowner: _____

Tract (s):_____

Date:_____

Definition

Growing planned rotations of crops or fallow land with strips of forages or small grains in a systematic arrangement of equal width strips across a field.

Purpose

This practice may be applied as part of a conservation management system to achieve one or more of the following purposes.

- Reduce soil erosion from water and transport of sediment and other waterborne contaminants.
- Reduce soil erosion from wind.
- Protect growing crops from damage by wind-borne soil particles.
- Enhance wildlife and pollinator habitat.

Conditions where Practice Applies

This practice applies on land where crops are grown.

Considerations

Consider the impact of alternative tillage practices and crop production methods that change cover and roughness or ridge height to provide more or less erosion protection depending on design needs.

To avoid wide fluctuations in acres of different crops each year, the conservation crop rotation on stripcropped fields should contain equal years of row and forage crops and must be consistent with the farm enterprise crop needs.

Consider utilizing Wisconsin NRCS Standards 329, Residue and Tillage Management - No Till/Strip Till/Direct Seed, or 386, Field Border, to protect headlands from excessive soil erosion.

Increasing residue cover and roughness will change the vegetative cover-management conditions and decrease overland flow velocities, thus increasing the maximum allowable slope length.

Consider the use of diversions, grassed waterways, water and sediment control basins, underground outlets, or other suitable practices to protect areas of existing or potential ephemeral or concentrated flow erosion.

Erosion-resistant strips in rotation shall be managed to maintain the planned vegetative cover and surface roughness during periods when wind erosion is expected to occur. The protective cover must be adequate to inhibit the initiation of wind erosion and the surface roughness will be sufficient to trap saltating soil particles originating upwind.

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Plans and Specifications

Specifications for establishment and operation of this practice shall be prepared for each field according to the Criteria, Considerations, and Operation and Maintenance described in this standard. The plans shall include:

- the percent land slope and slope length (L) used to plan the practice;
- the minimum and maximum allowable row grades for the stripcropping system;
- an estimate of before and after soil loss;
- the design width of strips and actual width of strips as installed;
- the farm equipment type and width utilized to adjust the strip width;
- a sketch, plan map, or photograph of the field showing:
    1. the approximate location of the key line(s) used to establish the system,
    2. the location of stable outlets and outlets needing treatment identified during the design of the contour buffer system, and
    3. the location of all existing or planned supporting conservation practices needed to control surface water runoff

Operation and Management

- Sediment accumulations along strip edges shall be smoothed or removed and distributed over the field as necessary to maintain practice effectiveness.

- If strip alignment is lost due to adjacent hay strips, the original strip alignment and width will be re-established before row crop strips are planted.

- Maintain full headland width to allow turning of farm implements at the end of a tilled strip to double back on the same strip.

- Mow sod turn-strips and grassed waterways at least once a year to maintain vigorously growing vegetative cover and to control encroachment by woody vegetation.

References

- USDA, NRCS Wisconsin Field Office Technical Guide (FOTG), Section IV, Practice Standard 585, Stripcropping.
- Foster, G.R. Revised Universal Soil Loss Equation, Version 2 (RUSLE2) Science Documentation (In Draft). USDA-ARS, Washington, DC. 2005.
- USDA, NRCS, Revised Universal Soil Loss Equation Version 2 (RUSLE2) Wisconsin web site: http://www.wi.nrcs.usda.gov/technical/consplan/rusle.html.
- Renard, K.G., G.R. Foster, G.A. Weesies, D.K. McCool, and D.C. Yoder, coordinators. 1997. Predicting soil erosion by water: A guide to conservation planning with the Revised Universal Soil Loss Equation (RUSLE).U.S. Department of Agriculture, Agriculture Handbook 703.
- Chepil, W.S. and Woodruff, N.P., 1963. The Physics of Wind Erosion and Its Control. Adv. Agron.
- Woodruff, N.P., Lyles, L., Siddoway, F.H. and Fryrear, D.W., 1972. How to Control Wind Erosion. USDA, ARS. Agricultural Information Bulletin No. 354

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Certification Requirements For Practice Standard 585 Stripcropping: All Fields Must Include the Following Information

- o Conservation plan map identify the location of the contour strip cropping practice.

- o Plan map for each field identifies the approximate location of each key line used to establish the contour strip cropping system.

- o Documentation verify the following design criteria and specifications meet the standard requirements:
  - At least 50 percent of the rotation shall consist of an erosion resistant cover,
  - Minimum and maximum row grades,
  - No two adjacent strips are in row crops (close sown perennial crop above or below annual crop) and
  - Row crop strip width does not exceed 50% of the slope length, unless a close sown perennial crop occupy the entire slope (L).

- o Documentation include design criteria computations of minimum and maximum buffer strip width, minimum and maximum row grades, critical slope length, and erosion calculations using the Revised Universal Soil Loss Equation for each field and conservation plan include the location of existing facilitating practices necessary to ensure compliance with the standard criteria of 585 Stripcropping.

- o Surface water flow from the contour buffer strip crop rows directed to headlands/end rows; documentation verify headlands or end rows are protected from erosion by utilizing field borders, no-till farming, contouring farming row grade is less than 2% toward the headlands or soil loss computations using the Revised Universal Soil Loss Equation computes low soil loss rates below the tolerance for the planned soil map unit.

- o Surface water flow from the contour buffer strip crop rows directed to concentrated flow areas of fields; documentation, verify ephemeral/gully is not present or the conservation plan include applied practices that provide a stable outlet during runoff events.

- o Field Inspection Date:_____ Acres planned:_____ Acres applied:_____

Comments:_____

_____.

_____

I certify that NRCS Wisconsin practice standard 585 Stripcropping was applied according to the standard design criteria and documentation includes all criteria related computations and analysis.

Certified by:_____Date:_____

TSP or Certified Conservation Planner

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Wisconsin Practice Standard 585 Stripcropping—Checklist

o Conservation plan map identify the location of the contour strip cropping practice.

o Plan map for each field identifies the approximate location of each key line used to establish the contour strip cropping system.

o Documentation verify the following design criteria and specifications meet the standard requirements:

- At least 50 percent of the rotation shall consist of an erosion resistant cover,
- Minimum and maximum row grades,
- No two adjacent strips are in row crops (close sown perennial crop above or below annual crop) and
- Row crop strip width does not exceed 50% of the slope length, unless a close sown perennial crop occupy the entire slope (L).

o Documentation include design criteria computations of minimum and maximum buffer strip width, minimum and maximum row grades, critical slope length, and erosion calculations using the Revised Universal Soil Loss Equation for each field and conservation plan include the location of existing facilitating practices necessary to ensure compliance with the standard criteria of 585 Stripcropping.

o Surface water flow from the contour buffer strip crop rows directed to headlands/end rows; documentation verify headlands or end rows are protected from erosion by utilizing field borders, no-till farming, contouring farming row grade is less than 2% toward the headlands or soil loss computations using the Revised Universal Soil Loss Equation computes low soil loss rates below the tolerance for the planned soil map unit.

o Surface water flow from the contour buffer strip crop rows directed to concentrated flow areas of fields; documentation, verify ephemeral/gully is not present or the conservation plan include applied practices that provide a stable outlet during runoff events.

o Field Inspection Date:_____ Acres planned:_____ Acres applied:_____

Comments:_____

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I certify that NRCS Wisconsin practice standard 585 Stripcropping was applied according to the standard design criteria and documentation includes all criteria related computations and analysis.

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