United States Department of Agriculture

Natural Resources Conservation Service

Contour Farming
Wisconsin Job Sheet 330

Landowner: _____ **Date:**_____

Tract (s):_____

Definition

Using ridges and furrows formed by tillage, planting and other farming operations to change the direction of runoff from directly downslope to around the hill slope (perpendicular to the field slope).

Purpose

This practice is applied to achieve one or more of the following:

- To reduce sheet and rill erosion.
- To reduce transport of sediment, other solids, and the contaminants attached to them.
- To increase water infiltration.

Conditions where Practice Applies

This practice applies on sloping land where annual crops are grown and is best suited for sites with uniform slopes where row grade criteria can be met. Contour farming is applied concurrently with other practices, such as conservation crop rotation and residue management. All tillage and crop planting activities shall be carried out in a uniform pattern that is generally perpendicular to the field slope.

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.

Increasing residue cover and roughness will change the vegetative cover-management conditions and decrease overland flow velocities, thus increasing the maximum allowable slope length. Increasing roughness alone is not sufficient to produce this effect.

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

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

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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:

- percent land slope a slope length used for planning each contour farming layout,
- the minimum and maximum allowable row grades for the contour system, and
- 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 farming system, and
    3. the location of all existing or planned supporting conservation practices needed to control surface water runoff

Operation and Management

- Perform all tillage and planting operations parallel to contour baselines or terraces, diversions, or contour buffer strip boundaries where these practices are used, provided the applicable row grade criteria are met.
- Where terraces, diversions, or contour buffer strips are not present, maintain contour markers on grades that, when followed during establishment of each crop, will maintain crop rows at designed grades. Contour markers may be field boundaries, a crop row left untilled near or on an original contour baseline, or other readily identifiable, continuous, lasting marker.
- All tillage and planting operations shall be parallel to the established marker. If a marker is lost, re-establish a contour baseline within the applicable criteria set forth by this standard prior to seedbed preparation for the next crop.
- Farming operations should begin on the contour baselines and proceed both up and down the slope in a parallel pattern until patterns meet. Where field operations begin to converge between two non-parallel contour baselines, establish a correction area that is either permanently in sod or established to an annual close-grown crop.

References

- USDA, NRCS Wisconsin Field Office Technical Guide (FOTG), Section IV, Practice Standard 330 Contour Farming.
- 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

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Certification Requirements For Practice Standard 330 Contouring: All Fields Must Include the Following Information

- ☐ Conservation plan map identify the location of fields that are contoured.

- ☐ Plan map for each field identifies the approximate location of key line (s) or baseline (s) used to establish the contouring system.

- ☐ Documentation include design criteria computations of minimum and maximum row grades, row spacing, critical slope length, minimum row ridge height, 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 330 contouring.

- ☐ Surface water flow from contour 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.

- ☐ Surface water flow from the contour 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.

- ☐ Field Inspection Date:_____ Acres planned:_____ Acres applied:_____
  Comments:_____

  _____.

I certify that NRCS Wisconsin practice standard 330 Contouring was applied according to the standard design criteria and documentation includes all criteria related computations and analyses.

Certified by:_____ Date: _____

TSP or Certified Conservation Planner

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Wisconsin Practice Standard 330 Contouring—Checklist

- ☐ Conservation plan map identify the location of fields that are contoured.

- ☐ Plan map for each field identifies the approximate location of key line (s) or baseline (s) used to establish the contouring system.

- ☐ Documentation include design criteria computations of minimum and maximum row grades, row spacing, critical slope length, minimum row ridge height, 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 330 contouring.

- ☐ Surface water flow from the contour 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.

- ☐ Surface water flow from the contour 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.

- ☐ Field Inspection Date:_____ Acres planned:_____ Acres applied:_____
  Comments:_____

  _____.

I certify that NRCS Wisconsin practice standard 330 Contouring was applied according to the standard design criteria and documentation includes all criteria related computations and analyses.

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