Conservation Crop Rotation

Georgia

Conservation Practice Job Sheet – 328 (10/15)

Producer _____ County_____ Date_____

Farm # _____ Tract # _____ Assisted By _____

Conservation Crop Rotation

Definition

Conservation crop rotation is growing crops in a planned recurring sequence on the same field. The practice applies to all cropland when at least one annual crop is included in the crop rotation. The rotation must include a minimum of two crops. A cover crop is considered to be a crop. The practice does not apply to pastureland, hayland, or other land uses where crops are grown occasionally only to facilitate renovation or re-establishment of perennial vegetation.

Purposes

Identify one or more of the purposes listed in Table 1. The first three purposes are likely to be used together in many conservation plans.

Conservation Management System

Rarely does a single conservation practice provide the treatment needed for a resource concern. Conservation crop rotation is a component of a conservation management system. A conservation management system is a combination of conservation practices and management that achieves a level of treatment for our soil, water, air, plant, energy and animal resources.

Practices such as residue management, cover crops, pest management, nutrient management and various structures may be needed in addition to conservation crop rotation.

Requirements

This practice is likely to be used to manage pests while promoting soil quality and reducing sheet and rill erosion. Documentation of the primary purpose may be as simple as making a general statement next to the purpose in Table 1 if the goal is to avoid pest problems in general. Provide specific documentation if the goal is to avoid or manage a specific pest problem according to UGA recommendations.

The results of the NRCS RUSLE2 (or current soil erosion prediction software), must be documented when the purpose is to reduce soil erosion or improve soil quality. Also, note the crop yield, cover crop biomass and tillage of the current (A) rotation. Compare the results to the planned (B) and actual (C) rotations.

For all purposes, crops are to be established in a planned sequence (Table 2). Alternative crops must be planned even if they are not seeded. As mentioned above, cover crops are considered different crops. However, the maximum benefits for managing some plant

pests and increasing soil health can be expected when crops are rotated during the season, in addition to planting a cover crop in sequence.

Lifespan 1 year

Operation and Maintenance
Rotations shall provide for acceptable substitute crops in case of crop failure or shift in planting intentions for weather related or economic reasons. Acceptable substitutes are crops having similar properties that will accomplish the purpose of the original crop.

Evaluate the rotation and the crop sequence to determine if the planned system is meeting the planned purposes (Table 4).

For More Information Contact your local NRCS Office or Soil & Water Conservation District.

Table 1 – Identify practice purposes below and provide documentation in the following tables, a companion practice standard jobsheet and/or in a RUSLE2 printout.

I. Likely objectives of this practice

☐ **Reduce plant pest pressures**. Provide a statement of purpose when the goal is to avoid pest problems in general. See the Cover Crop standard and jobsheet if a cover crop is used to manage weeds. For other pests, provide specific information required by UGA.

☐ **Reduce sheet, rill and wind erosion or maintain or increase soil health and organic matter content.** Collect producer information (Table 3 and Appendix I) and use the soil loss software to obtain the desired result (fill in Tables 4A-C or attach a RUSLE2 printout).

II. Other objectives of this practice

☐ **Improve soil moisture efficiency**. See Irrigation Water Management Standard (449)

☐ **Reduce water quality degradation due to excess nutrients**. Estimate and account for nitrogen available to the subsequent cash crop. See Cover Crop (340) and Nutrient Management (590) Standards

☐ **Provide feed and forage for domestic livestock.** Provide information from required by UGA. Do not graze a cover crop in a conservation tillage system.

☐ **Provide food and cover habitat for wildlife and nesting.** The following tools for evaluating wildlife habitat within cropland are located in FOTG and can be accessed using this link http://efotg.sc.egov.usda.gov/toc.aspx?CatID=2918:

- Wildlife Habitat Suitability Index (for general wildlife habitat evaluation and planning)
- 327 Conservation Cover Pollinator Job Sheet
- Native Bee Pollinator Habitat Assessment Form and Guide – Farms and Agricultural Landscapes
- Beneficial Insect Habitat Assessment Form and Guide.

Table 2 – Crop rotation planting information for all purposes. Include alternative species in the planning process.

Field/Acres	Planned/Alternative Species	Actual Species	Planting Date	PLS[1] Seeding Rate (lbs./ac.)	Depth (in.)/ Inoculant

[1/]PLS represents Pure Live Seed. To calculate PLS, multiply the purity % times the germination %. Then divide the recommended seeding rate by the PLS to get the actual seeding rate.

For example: Rye seed has a purity of 90% and germination of 85%.
Step 1: The PLS = 0.90 X 0.85 = 0.77. (Only 77% of the material in the sack of seed is seed that will germinate.)
Step 2: Divide the recommended seeding rate (60 lb. in this example) by 0.77 to get the actual seeding rate of 78 pounds per acre that is needed in order to be planting 60 pounds of good seed.
Note: The use of seed with a low PLS usually has low vigor and will not grow satisfactorily

Table 3. Record field operations that disturb soil and the amount of residue (Appendix I, dry lbs./acre) produced for each crop for the entire rotation. This information is needed for RUSLE2, or other software, if the purpose is to reduce erosion or enhance soil quality.

Date	Notes

Table 4A. Provide documentation of the soil loss (T) or a positive trend in the organic matter (OM) subfactor of the soil condition index (SCI) when the goal is to promote soil health or reduce soil erosion, respectively. Compare the results for the actual (Table C) rotation to the current (Table A) and planned (Table B) rotations. Use these tables or attach a printout from the soil loss software.

A. **Current crop rotation**

Field	Year	Date	Crop and Tillage System	Data

B. **Planned crop rotation**

Field	Year	Date	Crop and Tillage System	Data

C. **Actual crop rotation**

Field	Year	Date	Crop and Tillage System	Data

Table 5. O&M notes

Date	O&M Notes

Jobsheet Certifications

Prepared by

_____**Title**_____**Date**_____

Approved by

_____**Title**_____**Date**_____

Installation Meets NRCS Standards and Specifications

Certified by

_____**Title**_____**Date**_____

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