

Soil Erosion Enhancement Activity – SOE01 - Continuous no-till with high residue



Enhancement Description

Utilize continuous no-till/strip till/direct seed in the rotation in combination with high and low residue producing crops or cover crops to maintain a high level of residue cover through critical erosion periods.

Land Use Applicability

Cropland.

Benefits

High levels of surface residue with continuous no-till/strip till/direct seed reduce erosion by

wind and water by up to 90%. The result is increased soil organic matter compared to intensively tilled soils with no surface residue protection. This will in turn, enhance and protect water quality and biotic communities that depend on clean water.

Criteria

Implementation of this enhancement **requires** the use of continuous no-till/strip till/direct seed. The no-till/strip till/direct seed system must incorporate 1 or more of the following activities.

1. Maintain high level of residue cover after no-till planting all crops in the rotation.
 - a. Utilize high residue crops in the rotation
 - b. Maintain a minimum of 50% residue cover after no-till planting all crops.
2. Use high residue cover crops to provide adequate residue for no-till planting after or between low residue crops in rotation.
 - a. Utilize high and low residue crops in the rotation
 - b. Use no-till to plant high residue cover crops between two low residue annual crops
 - c. Maintain a minimum of 50% residue cover after no-till planting all crops.
3. Low disturbance no-till planting and moderate level of residue cover after or between low residue crops in rotation.
 - a. Utilize high and low residue crops in the rotation
 - b. After high residue crops, maintain a minimum of 50% residue cover after no-till planting
 - c. After low residue crops use low disturbance no-till planting; maintain a Soil Tillage Intensity Rating (STIR) ≤ 20 and a minimum of 30% residue cover after planting.



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In addition, each field must also have the soil loss at or below the tolerance (T) level for wind and/or water erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of 30 or less for each planted crop or cover crop in the rotation.

Documentation Requirements

1. Crop rotation records including rotation length in years, crops and cover crops planted.
2. Sequence and description of operations for each crop and/or cover crop including harvest, residue conditioning, nutrient placement and planting/seeding.

ALABAMA SUPPLEMENT TO ENHANCEMENT SOE01 CONTINUOUS NO-TILL WITH HIGH RESIDUE

This enhancement is designed to reduce erosion by utilizing high levels of surface residue with continuous no-till/strip till/direct seeding. To implement this enhancement the producer is required to incorporate one or more of the criteria from the national enhancement. Alabama list of high and low residue crops are included. In addition, each field must also have the soil loss at or below the tolerance (T) level for erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of 30 or less for each planted crop or cover crop in the rotation. For additional information see the national enhancement. Refer to the NRCS Conservation Practice Standard Cover Crops, 340, for information on planting dates and rates of cover crops.

Documentation Requirements:

1. Crop rotation records including rotation length in years, crops and cover crops planted.
2. Sequence and description of operations for each crop and/or cover crop including harvest, residue conditioning, nutrient placement and planting/seeding.

| HIGH RESIDUE CROPS | LOW RESIDUE CROPS |
|--|-----------------------|
| Corn (grain, sweet corn) | Corn (silage) |
| Sorghum (grain) | Corn (residue grazed) |
| Small Grains (grain or cover) | Sorghum (Silage) |
| Perennial forages grasses | Soybean |
| Pearl Millet (managed for residue) | Sunflower |
| Sorghums (managed for residue) | Root crops |
| Sudangrass (managed for residue) | Vegetable Crops |
| Ryegrass (managed for residue) | Cotton |
| Mixtures of cool-season annual grasses and legumes (managed for residue) | Peanut |
| Hairy Vetch (managed for residue) | Annual clover |
| | Perennial clover |
| | Austrian winter pea |
| | Caley pea |

References:

Alabama, Conservation Practice Standard Cover Crops (340)

<http://efotg.sc.egov.usda.gov/references/public/AL/340rev04.pdf>

ALABAMA SUPPLEMENTAL INFORMATION FOR THIS ENHANCEMENT

SOE01 - Continuous No Till with High Residue

Documentation Form

| | | | | |
|--|--|----------------|--|--|
| Producer Name: | | Date: | | |
| Tract Number(s): | | County: | | |
| Field Number(s): | | | | |
| Crop Rotation: | | | | |
| Length in years: | | | | |
| Crop(s) Planted: | | | | |
| Sequence/Description of operations for each crop : | | | | |
| Residue Conditioning | | | | |
| Planting/Seeding | | | | |
| Nutrient Placement | | | | |
| Harvest | | | | |
| Cover Crop Planted: | | | | |
| Sequence/Description of operations for each cover crop: | | | | |
| Residue Conditioning | | | | |
| Planting/Seeding | | | | |

The documentation submitted accurately represents the implementation of this enhancement.

SIGNATURE: _____