

Soil Erosion Enhancement Activity – SOE03 - Continuous No Till (Organic System)



Enhancement Description

This enhancement is for using a continuous no-till, strip till or direct seeding method of planting throughout the planned rotation on an organic farm. High residue levels are maintained by including high residue-producing crops, or by low residue crops followed by a cover crop in the rotation. Termination of all cover crops is accomplished using non-chemical methods, such as flail mowing, roller crimper and frost kill. No herbicides are used for weed control.

Land Use Applicability

This enhancement is applicable on cropland that is certified as organic or on conventional acreage that is being transitioned for organic certification.

Benefits

Use of continuous no-till, strip till or direct seeding leaves high levels of crop residue that can reduce erosion by wind and water up to 90%, increase soil organic matter, and control weeds. Mechanically terminating cover crops using a flail mower or roller crimper can eliminate the use of herbicides, thereby reducing potential offsite water quality problems while leaving the soil undisturbed.

Criteria

Implementation of this enhancement requires the use of continuous no-till, strip till or direct seeding on all crops during the planned rotation that is part of an organic system plan. The no-till, strip till or direct seeding system must incorporate the following activities:

1. Rotations that include only high residue producing crops
 - a. No cover crop required
 - b. Use only crops that produce high residue levels throughout the rotation, e.g. corn, wheat
 - c. Maintain a minimum of 90% residue cover on the soil surface after no-till, strip till or direct seed planting all crops
2. Rotations that include low residue crops
 - a. Use a cover crop after ALL low residue crops, e.g. vegetables, cotton, soybeans
 - b. Plant cover crops using a no till system
 - c. Maintain a minimum of 90% residue cover on the soil after no-till planting all crops



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- d. Use warm-season cover crops between spring and late summer crops or prior to late summer vegetable production
3. Additional Criteria
 - a. All residues must be uniformly distributed over the entire field
 - b. No full-width tillage is permitted regardless of the depth of the tillage operation
 - c. Field(s) must have a 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
4. No Herbicides are used for weed control
5. Termination of all cover crops is accomplished using non-chemical methods, such as flail mowing, roller crimper and frost kill

Documentation Requirements

- Planned crop rotation showing cover crops that will be used after low residue crops
- Planting method used for each crop in the rotation (no-till, strip till, direct seeding)
- List of all other potential ground disturbing farming operations
- Method of cover crop termination, e.g. flail mowing, roller crimper
- Dates for farming operations
- Map showing fields, acreage
- Photographs of planted crops

SOIL EROSION ENHANCEMENT ACTIVITY

SOE03– OR CONTINUOUS NO-TILL IN AN ORGANIC SYSTEM

Description

This Enhancement is for cropland that is certified organic or on conventional acres transitioning to organic certification. [Oregon Tilth](#) and the [Oregon Department of Agriculture](#) are the designated organizations that certify organic farms in Oregon. Click on the link for more information on the organic certification process.

Oregon Criteria

1. High Residue Producing Crops:

Small grains, winter/spring	Corn, field
Vetch	Corn, sweet
Flax	Eggplant
Camelina	Flax
Sorghum	

2. Low Residue Producing Crops:

All others:

Artichoke	Asparagus	Beans, dry	Beans, green	Beets	Broccoli
Buckwheat	Celery	Cauliflower	Carrot	Cantaloupe	Canola
Cabbage	Chicory	Corn, silage	Cucumbers	Garlic	Greens
Lavender	Lettuce	Onions	Peas	Peppers	Potatoes
Pumpkin	Radish	Safflower	Soybean	Spinach	Squash
Sugar beet	Tomato	Turnip	Watermelon		

Documenting The Enhancement

- 1. A map or aerial photo showing fields where the Activity is applied**
- 2. Photographs of a representative number of fields showing the planted crops**

7. Residues uniformly distributed over the entire field?
8. Soil Loss at or below the soil loss tolerance (T) level for wind and/or water erosion for the rotation? Yes No
9. Soil Tillage Intensity Rating (STIR) of 30 or less for each crop/cover crop in rotation?
 Yes No