United States Department of Agriculture

CONSERVATION ENHANCEMENT ACTIVITY

E340A

CONSERVATION STEWARDSHIP PROGRAM

Cover crop to reduce soil erosion

Conservation Practice 340: Cover Crop

APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial)

RESOURCE CONCERN: Soil

ENHANCEMENT LIFE SPAN: 1 Year

Enhancement Description

Cover crop added to current crop rotation to reduce soil erosion from water and wind to below soil tolerance (T) level. Cover crops grown during critical erosion period(s). Species are selected that will have physical characteristics to provide adequate erosion protection.

Criteria

- Plant species, seedbed preparation, seeding rates, seeding dates, seeding depths, fertility requirements, and planting methods will be consistent with applicable local criteria and soil/site conditions **(REFER TO STATE SPECIFIC LISTS)**. Determine method and timing of termination to meet grower's objective and current NRCS Cover Crop Termination Guidelines.
- Select species that are compatible with other components of the cropping system.
- Ensure herbicides used with crops are compatible with cover crop selections.
- Cover crops may be established between successive production crops, or companion-planted or relay-planted into production crops. Select species and planting dates that will not compete with production crop yield or harvest.
- Do not burn cover crop residue.
- Do not harvest or graze cover crop.

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- If specific rhizobium bacteria for selected legumes are not present in the soil, treat seed with appropriate inoculum at time of planting.
- Time cover crop establishment in conjunction with other practices to adequately protect soil during critical erosion period(s).
- Select cover crops that will have the physical characteristics necessary to provide adequate erosion protection.
- Use NRCS erosion prediction technology to determine amount of surface and/or canopy cover needed from cover crop to achieve the erosion objective (average annual soil loss below T).
- Crops planted following the cover crop must be no-tilled.

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Documentation and Implementation Requirements

Participant will:

- ☐ Prior to implementation, provide NRCS with the current planned crop rotation, cover crop information, and field operation(s) used for each crop.

Current Management Rotation Including Cover Crop

Field	Planned Crops/Cover Crop (in sequence)	Planting Date	Harvest/Termination Date

Current Field Operations for each crop

Field	Crop	Field Operation	Timing of Field Operation (month/year)

Planned Management Rotation Including Cover Crop

Field	Planned Crops/Cover Crop (in sequence)	Planting Date	Harvest/Termination Date

Planned Field Operations for each crop

Field	Crop	Field Operation	Timing of Field Operation (month/year)

Cover Crop Mix and Seeding Rate

Species	Variety	Seed Size	Typical Seeding Depth	Seeding Rate (PLS lbs/acre)	Percent of Mix (%)

Establishment and Management Considerations:

Task	Provide information and details
Seedbed Preparation	
Seeding Date	
Seeding Depth	
Seeding Method	
Fertilizer, as needed	
Weed Management, as needed	
Termination Date (window)	
Termination Method	

☐ Prior to implementation, read and follow current NRCS Cover Crop Termination Guidelines.

☐ During implementation, cover crops must not be burned, grazed or harvested.

☐ During implementation, the crop following the cover crop must be no till seeded.

- ☐ During implementation, notify NRCS of any planned changes in crops, crop rotation, or unharvested areas to verify the planned system meets the enhancement criteria.
- ☐ After implementation, if changes to the cover crop and crop rotation were made, complete the tables above to document the applied Cover Crop for the contract period and provide to NRCS.

NRCS will:

- ☐ As needed, provide technical assistance in selecting cover crop mixes for the crop rotations or substitute species that would meet the criteria of the enhancement.
- ☐ As needed, provide additional assistance to the participant as requested.
- ☐ Prior to implementation, provide and explain the current NRCS Cover Crop Termination Guidelines.
- ☐ Prior to implementation, use information provided from the participant to calculate the management sheet and rill erosion from water and wind erosion value for each field using current NRCS water erosion prediction technologies.

  Benchmark Management Soil Loss = _____ tons/acre/year

  Planned Management Soil Loss = _____ tons/acre/year
- ☐ During implementation, evaluate any planned changes to cover crop mix, timing in crop rotation, management, or field operations to verify the new system meets the enhancement criteria.
- ☐ After implementation, evaluate the applied cover crop in the crop rotation or management using information provided from the participant, if any variation to planned evaluation, then calculate erosion values to document that the applied rotation met the enhancement criteria.

  Applied Management Soil Loss = _____ tons/acre/year

NRCS Documentation Review:

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I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

_____ _____

NRCS Technical Adequacy Signature Date

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

340 - Cover Crop Implementation Requirements

Producer: _____ **Project or Contract:** _____

Location: _____ **County:** _____

Farm Name: _____ **Tract Number:** _____

Practice Location Map

(showing detailed aerial view of where practice is to be installed on farm/site, showing all major components, stationing, relative location to any landmarks, and survey benchmarks)

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Utility Safety / One-Call System Information

Description of work:

NRCS Review Only

Designed By: _____ **Date:** _____

Checked By: _____ **Date:** _____

Approved By: _____ **Date:** _____

The Practice Purpose(s):

___ Reduce erosion from wind and water.

___ Increase soil organic matter content.

___ Capture and recycle or redistribute nutrients in the soil profile.

___ Promote biological nitrogen fixation and reduce energy use.

___ Increase biodiversity.

___ Suppress weeds.

___ Manage soil moisture.

___ Minimize and reduce soil compaction.

Seeding and Management: *Fill in the following table with the appropriate cover crop information for each field.*

Field #	Acres	Species	Seeding rate (lbs/ac PLS*)	Seeding date range	Seeding method	Termination date or stage	Termination method

**To figure Pure Live Seed (PLS) rates, multiply the percent purity by the percent germination. Divide the seeding rate by the percent PLS to find the bulk seed needed per acre. For example: 98% purity X 60% germination = 0.588% PLS 10 lbs/acre X 0.588% PLS = 17 lbs/acre.*

Soil Amendments, if needed. *Apply soil amendments prior to seedbed preparation or before seeding if a no-till drill is used.*

Field	N fertilizer needed (lbs/acre)	K20 fertilizer needed (lbs/acre)	P2O5 fertilizer needed (lbs/acre)

Additional specifications:

OPERATION AND MAINTENANCE

__ Control growth of the cover crop to reduce competition from volunteer plants and shading.

__ Control weeds in cover crops by mowing or by using other pest management techniques.

__ Control soil moisture depletion by selecting water efficient plant species and terminating the cover crop before excessive transpiration.

__ Evaluate the cover crop to determine if the cover crop is meeting the planned purpose(s). If the cover crop is not meeting the purpose(s) adjust the management, change the species of cover crop, or choose a different technology.