



CONSERVATION ENHANCEMENT ACTIVITY

E340D

CONSERVATION STEWARDSHIP PROGRAM

Intensive orchard/vineyard floor cover cropping to increase soil health

Conservation Practice 340: Cover Crop

APPLICABLE LAND USE: Crop (Perennial)

RESOURCE CONCERN: Soil

ENHANCEMENT LIFE SPAN: 1 Year

Enhancement Description

Implement orchard or vineyard floor cover crops. Cover crop shall not be harvested, grazed, or burned. Must achieve a soil conditioning index of zero or higher and produce a positive trend in the Organic Matter subfactor over the life of the rotation.

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 the method and timing of termination to meet the grower's objective and the 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

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achieve the purpose of the cover crop without negatively impacting the production crop yield or harvest.

- Do not burn cover crop residue.
- Do not harvest the cover crop.
- If the specific rhizobium bacteria for the selected legume are not present in the soil, treat the seed with the appropriate inoculum at the time of planting.
- Cover crop must provide soil coverage during all non-crop production periods to the maximum extent possible considering the cropping system, climate, and soils in the annual crop rotation. **(STATES SHALL PREPARE GUIDANCE FOR THEIR LOCAL CLIMATES AND CROPPING SYSTEMS.)** *Minimum 2 species cover crop mix* will be selected based on producing higher volumes of organic material and root mass to maintain or increase soil organic matter.
- Planned crop rotation including cover crop biomass production and associated management activities must achieve a management soil conditioning index (SCI) of zero or higher and result in a positive trend in the Organic Matter (OM) sub factor value over the life of the rotation.
- Cover crops are replanted annually.
- Grow cover crops on a minimum of 60% of the field area year annually.



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Documentation and Implementation Requirements

Participant will:

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

Current Management Rotation

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



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Cover Crop Mix and Seeding Rate – *minimum 2 species cover crop mix*

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](#).
- Prior to implementation, determine develop map showing the area(s) to be planted to cover crop. Cover crop must cover at least 60% of the field area each year.
- During implementation, cover crops must not be burned or harvested.
- 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.



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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 Soil Conditioning Index (SCI) value and Organic Matter (OM) subfactor value over the life of the rotation. Cover crop must increase SCI and OM sub factor from the current/benchmark condition and SCI value must be zero or greater and have a positive trending OM subfactor over the life of the rotation.

Benchmark Management SCI = _____ Benchmark Management OM sub factor = _____

Planned Management SCI = _____ Planned Management OM sub factor = _____

- Prior to implementation, verify the cover crop mix includes at least 2 species of cover crop.
- Prior to implementation, verify the development of a map showing the area(s) to be planted to cover crop.
- Prior to implementation, verify cover crop will cover at least 60% of the field area each year.
- During implementation, evaluate planned adjustments in cover crop selected, timing in crop rotation, management, or field operations to verify the new system meets the enhancement criteria.
- After implementation, evaluate the applied crop rotation or management using information provided from the participant, if any variation to planned evaluation, then calculate SCI values to document that the applied rotation met the enhancement criteria.

Applied Management SCI = _____, Applied Management OM sub factor = _____

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NRCS Documentation Review:

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

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Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature Date



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**IOWA SUPPLEMENT TO
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Additional Criteria for Iowa

- State list of approved Cover Crop species, seeding rate, seeding dates, seeding depths and planting methods for increasing soil health and OM can be found in the current 340 Iowa Implementation Requirements for Cover Crop.
- Mixes may be developed using the Midwest Cover Crops Council Cover Crop Decision Tool for Iowa <http://mccc.msu.edu/selector-tool/>. Filter the list of potential cover crops for your county by selecting the first goal as soil builder.