



**CONSERVATION ENHANCEMENT ACTIVITY**

**E340B**

**CONSERVATION STEWARDSHIP PROGRAM**

**Intensive cover cropping to increase soil health and soil organic matter content**

**Conservation Practice 340: Cover Crop**

**APPLICABLE LAND USE: Crop (Annual & Mixed)**

**RESOURCE CONCERN: Soil**

**ENHANCEMENT LIFE SPAN: 1 Year**

**Enhancement Description**

Implementation of cover crop mix to provide soil coverage during ALL non-crop production periods in an annual crop rotation. Cover crop shall not be harvested or burned. Planned crop rotation including cover crops and associated management activities must achieve a soil conditioning index (SCI) of zero or higher. The current NRCS wind and water erosion prediction technologies must be used to document SCI calculations.

**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.

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|--|-----------|----------|
| E340B - Intensive cover cropping to increase soil health and soil organic matter content | July 2019 | Page   1 |
|--|-----------|----------|



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- 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 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 3 species mix will be selected on the basis of producing higher volumes of organic material and root mass to maintain or increase soil organic matter.
- Planned crop rotation including cover crops, biomass produced, 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.

|  |           |          |
|--|-----------|----------|
| E340B - Intensive cover cropping to increase soil health and soil organic matter content | July 2019 | Page   2 |
|--|-----------|----------|



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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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### 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](#).



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- 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.

**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, verify the cover crop mix has a minimum of 3 species.
- Prior to implementation, provide and explain the current [NRCS Cover Crop Termination Guidelines](#).
- Prior to implementation, use the information provided from the participant to calculate the management Soil Conditioning Index (SCI) and Organic Matter (OM) sub factor 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 0 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 = \_\_\_\_\_**

- 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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|--|-----------|----------|
| E340B - Intensive cover cropping to increase soil health and soil organic matter content | July 2019 | Page   5 |
|--|-----------|----------|



**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 Acres Applied: \_\_\_\_\_ Fiscal Year Completed: \_\_\_\_\_

\_\_\_\_\_  
NRCS Technical Adequacy Signature

\_\_\_\_\_  
Date





**IOWA SUPPLEMENT TO  
CONSERVATION ENHANCEMENT ACTIVITY**

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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 Crops.
- 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.
- At least 50% of the seeding mix must be winter hardy cover crop species.
- The cover crop mix can be planted up to one week after the harvest of the previous crop and can only be terminated no more than two weeks prior to expected planting date for the following crop.
- Grazing may be allowed if SCI is positive and improvement can be documented.