**alliance practice worksheet**

virginia

Cover crops (340)

*The conditions and specifications below are adapted from the Natural Resources Conservation Service. Producers who are installing these practices under the Alliance will use the conditions and implementation guides below but are exempt from NRCS verification and certification. Completing the Purposes and Practice Specifications on this document is sufficient to self-verify practice installation and completion.*

# Farm Info

|  |  |
| --- | --- |
| Producer Name |  |
| County (Farm Location) |  |
| FSA Farm Number |  |
| FSA Field Number(s) |  |
| FSA Tract Number(s) |  |
| Practice Status:*If a practice has not yet been implemented, select Planned**If a practice has been implemented, select Applied* | [ ]  Planned | [ ]  Applied |
| Planned Date of IMPLEMENTATION: | Date Practice was APPLIED: |

# PRACTICE: COVER CROPS (340)

**DEFINITION**: Grasses, legumes, forbs planted for seasonal cover.

***NOTE:*** *If a cover crop has been implemented on your enrolled fields prior to your enrollment in this program, you are required to add an additional species to the cover crop mixture that is implemented during the time of this contract, and that additional species must differ in functional group from the original species used. Cover crops are typically grouped by plant type as grasses, legumes, crucifers, and forbs. For example, to comply with this requirement, if the previous species/mixture contained only grass type species, you must add a legume, crucifer, or forb type species to fulfill the requirement. If the previous cover crop contained a mixture of 3 or more species and all 3 species are from different functional groups, no additional species will be required. However, the composition of the cover crop mixture may be adjusted as long as it complies with the NRCS standards and specification.*

**MINIMUM REQUIREMENTS FOR COVER CROPS (340):**

<https://efotg.sc.egov.usda.gov/api/CPSFile/743/340_VA_CPS_Cover_Crop_2015>

# GENERAL CRITERIA APPLICABLE TO ALL PURPOSES

* Select cover crop species that are:
	+ Compatible with producer’s objectives, site conditions, and other aspects of the farming system.
	+ Consistent with approved guidance such as VA Plant Establishment Guide: https://www.fsa.usda.gov/Internet/FSA\_File/nrcsspecieslist11.xls
	+ Not designated in Virginia as noxious weeds.
	+ Compatible with herbicides and their residues.
* Do not harvest cover crops for seed. Ensure any harvesting of covers for forage or fodder does not compromise intended conservation purpose.
* Do not burn cover crop residues.
* Ensure rhizobium bacteria for legume cover crops is present in the soil or treat the seed prior to planting.

# Additional Criteria to Reduce Erosion

Select and manage cover crops for adequate protection of soil during critical erosion periods.

# Additional Criteria to Maintain or Increase Soil Health and Organic Matter Content

**SOIL HEALTH**

Soil health refers to the amount of living organisms in the soil and their capacity to function, which in turn influences many soil functions. These organisms include bacteria, fungi, protozoa, nematodes, microarthropods, earthworms, and plants. They make up the “living” fraction of soil organic matter. For purposes of this Standard, there is no numerical measurement of soil health.

To maintain or increase soil health, select and manage cover crops to maximize implementation of the following soil health principles:

1. Keep soil covered.
2. Minimize soil disturbance, including physical disturbance from tillage and compaction and biochemical disturbance from amendments that may be toxic to soil organisms.
3. Maximize living roots, which refers to maximizing both the amount of living roots in the soil and the amount of time during every year that living roots are present.
4. Maximize biological diversity in the soil, which refers to maximizing not only plant diversity, but diversity of other inputs (manures, compost) and management techniques (managed grazing) that can enhance soil biology.

**CONTINUED ON NEXT PAGE **

**MAINTAIN OR INCREASE SOIL ORGANIC MATTER**

Soil organic matter refers to the total amount of carbon in the soil (not including mineral or carbonate forms of carbon). Improving soil organic matter content is not the same as improving soil health, although the two are usually closely related.

Selecting and managing cover crops to produce and return to the soil large quantities of above- and below-ground organic material generally increases soil organic matter.

For this Standard, use the Soil Conditioning Index (SCI) to provide a numerical prediction of soil organic matter trend.

Generating SCI scores requires analysis of the entire cropping system, not just the cover crop selection.

This includes inputs for climate and geographic location, topography, and soil type.

Ensure that the selected cover crops, with other management system practices, produce enough biomass, crop residue, and/or intervals without soil disturbance to achieve the following minimum performance targets.

1. A cropping system predicted to maintain soil organic matter content over time should have an SCI score of 0.00 or greater and predicted sheet and rill erosion at or below the soil loss tolerance level (T).
2. A cropping system predicted to improve soil organic matter content over time should have an SCI score of +0.25 or greater and predicted sheet and rill erosion at or below the soil loss tolerance level (T).

# Additional Criteria to Reduce Water Quality Degradation Due to Excessive Soil Nutrients

*Select/manage covers to achieve any of these:*

* Reduce the supply of excess nutrients in the soil (e.g., grasses or brassicas scavenging excess soil nitrogen (N) in the fall).
* Reduce the need to supply excess nutrients to the soil (e.g., legumes fixing atmospheric nitrogen for use by subsequent nitrogen-fertilized crops)
* Reduce transport for excess nutrients from the soil (e.g., covers reducing runoff, erosion, and leaching risk by transpiring moisture, increasing soil cover).

# Additional Criteria to Suppress Weeds or Break Pest Cycles

Select/manage covers to suppress weeds through:

* Competition by actively growing cover crops.
* Mulching effects of dead cover crop residues.
* Allelopathic effects due to chemicals released by cover crops or cover crop residues.

Suppress insects, diseases, or other pests by:

* Rotating to non-host cover crops or cover crops that release substances toxic to pests.
* Growing cover crops that provide habitat for beneficial insects and organisms.
* Drawing pests away from main crops to trap crops.

# Additional Criteria for Soil Moisture Management

Select/manage covers to eliminate or conserve soil moisture, depending on the need of the next crop(s).

# Additional Criteria to Minimize and Reduce Soil Compaction

Select/manage covers to improve soil porosity through any of following:

* Production of large diameter roots.
* Production of deep roots.
* Production of large quantities of root biomass.

*NOTE: This summary does not address all requirements and considerations in the VA Cover Crop Conservation Practice Standard (VA-340). Consult the Conservation Practice Standard for further details.*

# PRODUCER PURPOSE(S)

*Check all that apply.*

|  |
| --- |
| [ ]  Reduce erosion from wind and water |
| [ ]  Maintain or increase soil health or organic matter content |
| [ ]  Reduce water quality degradation due to excessive soil nutrients |
| [ ]  Suppress excessive weed pressures and break pest cycles |
| [ ]  Improve soil moisture management |
| [ ]  Minimize soil compaction |

# PRACTICE SPECIFICATIONS

*Follow all specifications and recommendations below for practice implementation.*

**GENERAL CRITERIA REQUIRED BY STANDARD IN ALL CASES FOR REDUCED-TILL CROPS**

1. Selected cover crop species and management shall be compatible with producer’s objectives, site conditions, and other crops and practices in the farming system.
2. Selected cover crop species and management shall be consistent with approved guidance from the USDA-NRCS Virginia Plant Establishment Guide. <https://www.fsa.usda.gov/Internet/FSA_File/nrcsspecieslist11.xls>
3. Plants designated in Virginia as noxious weeds shall not be used as cover crops.
4. Cover crop residue shall not be burned.
5. Herbicides and herbicides residues shall be compatible with cover crops.
6. Cover crops shall not be harvested for seed. Harvesting cover crops for forage shall not compromise intended conservation purposes of cover crops.
7. Ensure rhizobium bacteria for legume cover crops is present in soil or inoculate the seed at planting.

**TIMING OF COVER CROPS IN PLANNED CROPPING SEQUENCE**

*As appropriate, specify timing / role of cover crops in overall crop rotation. See also VA-328 for crop rotation planning.*

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|  |

**RECOMMENDATIONS/SPECIFICATIONS FOR COVER CROP ESTABLISHMENT, MANAGEMENT, AND TERMINATION**

***Optional.***

[**TABLE 1: RECOMMENDATIONS/SPECIFICATIONS FOR COVER CROP ESTABLISHMENT, MANAGEMENT, AND TERMINATION**](https://www.allianceforcsa.org/wp-content/uploads/2024/05/VA-Cover-Crops-340-Table-1-Cover-Crop-Establishment.docx)

# PRODUCER SELF-CERTIFICATION

By signing below, I certify that I have reviewed all required documentation, and the information outlined above meet all criteria and requirements as defined in the Natural Resources Conservation Service **COVER CROPS (340)** standard and specifications for the identified acres or animal units.

Further, I agree that:

[ ]  I have not received a payment for this conservation practice on these fields and acres from another USDA Conservation Program or another USDA Partnership for Climate-Smart Commodities grant partner.

[ ]  I will retain all practice documentation to support this certification for up to 12 months following practice adoption and will provide this documentation to the Alliance if selected for a spot check. *(Up to 10% of enrolled Alliance participants will be randomly selected for spot checks).*

|  |  |
| --- | --- |
| **Producer Name:** |  |
| **Date:** |  |