

COVER CROP

Practice 340

Non-Livestock Vegetative Practice

PRS Unit of Measurement: Acre

Definition: Crops including grasses, legumes, and forbs planted for seasonal cover and other conservation purposes.

Purpose: To 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, increase biodiversity. To suppress diseases, weeds and insects, provide supplemental forage, soil moisture management, reduce particulate emissions into the atmosphere and minimize or reduce soil compaction.

Applicability: On cropland requiring vegetative cover for natural resource protection and/or improvement. Cover Crop is an annually seeded vegetative cover for soil health improvement i.e. soil erosion or soil quality degradation improvements.

Limitations: Conservation Practice 340 Cover Crops is a management practice (One year lifespan) and may be scheduled for up to 3 consecutive years. The Cover Crop practice is to be used on Cropland following row-crop production. As a management practice if scheduled for several years on the same land unit the practice needs to be scheduled in consecutive years. As an example, the applicant can do three consecutive years on the same land unit. Another example could be Year 1 of the contract in field 1, Year 2 in field 2 and year three in field 3 or in field 2 (consecutive with the previous year). In this example you could not go back to field 1 in year 3 since this was not consecutive. Beginning with FY15 for the 2014 Farm Bill, Cover Crops have a State-wide cap of \$24,000/participant for regular EQIP and \$36,000/participant for Historically Underserved Participants. This is not a lifetime cap. For Scenario ID 340-6, the typical size for this scenario is 2 acres therefore the use of this scenario has a cap of \$2,000 for regular EQIP and \$3,000 for EQIP HU.

Exception to the limit for 3 years of payments for management practices in a contract. Conservation Practice 340 Cover Crops may be scheduled for up to 5 separate payments during the term of a single contract if the practice is applied as a component of a complete conservation system to address resource concerns related to Soil Health (such as soil erosion and soil quality degradation) and the following items are also met:

- Field is planned to meet the Soil Quality Criteria, specifically the Soil Conditioning Index (SCI) is positive and the field is at or below Tolerable Soil Loss limits (T).
- The planned conservation system includes 329 Residue and Tillage Management, No-Till for all five years of the contract covering the acres impacted by the planned Cover Crop practice.
- Minimum of 2 or more species in the Cover Crop mix in the last two years of the contract with at least one species being a winter hardy species.
- Expectation of at least 6 inches of growth under normal growing conditions at the time of termination.

For the 5 year payment the Cover Crop cap will be increased to \$40,000 for regular EQIP and \$60,000 for EQIP HU when in a single contract. If an applicant has already reached their cap for Farm Bill 14, they are not eligible for this situation.

Maintenance: Cover Crop will be maintained for a lifespan of 1 year.

Payment Schedule:

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
340-1	Chemical or Mechanical Kill Species	<p>Scenario Description: A single species grass/legume/brassica or mixed grass/legume/brassica cover will be planted as a cover crop immediately after harvest of a row crop (within 30 days), and will be followed by a row crop that will utilize fixed nitrogen and cover crop biomass as a mulch. This scenario assumes that seed will be planted with a no-till drill. Legume seeds must be inoculated with the proper inoculant prior to planting. The cover crop should be allowed to generate as much biomass as possible (reach early to mid-bloom) before it is terminated, without delaying the planting of the following crop. Termination methods include using approved chemical and/or mechanical methods, in order to maximize nitrogen fixation. The legume will promote biological nitrogen fixation and reduce energy use by reducing the need for commercial nitrogen fertilizer in following crops. After Practice Description: Within 30 days after harvest of row crop, fields are planted with a single species grass or legume cover crop, such as annual ryegrass, clover or vetch species. The cover crop is seeded with a no-till drill. No fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. Wind erosion is reduced by standing residues. The cover crop is terminated chemically and/or mechanically prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved due to the additional biomass, ground cover, soil infiltration, and plant diversity introduced to the cropping system. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect. By utilizing the nitrogen that is fixed by the legume cover crop, the amount of energy is reduced by reducing the amount of commercial fertilizer that will be needed for the following crop.</p>	Area planted	Acre	\$41.13	\$61.70	\$61.70	\$74.03

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
340-4	Winter Kill Species	<p>Scenario Description: Typically a small grain or small grain-brassica mix (may also use forage sorghum, legumes, buckwheat, etc.) will be planted as a cover crop immediately after harvest of a row crop (within 30 days), and will be followed by a row crop that will utilize the residue as a mulch. This scenario assumes that seed will be planted with a no-till drill. The cover crop species established under this scenario will winter kill, meaning no species termination is required. After Practice Description: Within 30 days after harvest of row crop, fields are planted with a small grain-brassica mix cover crop, typically oats and oilseed radish. The cover crop is seeded with a no-till drill. No additional fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. The cover crop is established using winter kill species which should not require termination in the spring. Over time, soil health is improved due to the additional biomass, ground cover, and plant diversity introduced to the cropping system. Wind erosion is reduced by standing residues. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect.</p>	Area planted	Acre	\$30.15	\$45.23	\$45.23	\$54.27

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
340-5	Organic Cover Crop	<p>Scenario Description: Typically a small grain or small grain-legume mix (may also use forage sorghum, radishes, turnips, buckwheat, etc.) will be planted as a cover crop immediately after harvest of an organically grown crop, and will be followed by an organically grown crop that will utilize the residue as a mulch. This scenario assumes that seed will be planted with a drill. The cover crop should be allowed to generate as much biomass as possible, without delaying planting of the following crop. The cover crop will be terminated using a mechanical kill method (mowing, rolling, undercutting, etc.), prior to planting the subsequent crop. This scenario REQUIRES use of Certified Organic Seed. After Practice Description: Within 30 days after harvest of organic crop, fields are planted with a small grain-legume mix cover crop, typically rye and clover. The average field size is 25 acres. The cover crop is seeded with a no-till drill. No additional fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. The cover crop is terminated with using a mechanical kill method (mowing, rolling, undercutting, etc.), prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved due to the additional biomass, ground cover, and plant diversity introduced to the cropping system. Wind erosion is reduced by standing residues. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect.</p>	Area planted	Acre	\$87.09	\$130.63	\$130.63	\$156.76

ID	Scenario Name	Scenario & <u>After Practice Description</u>	Scenario Feature Measure	Scenario Unit	EQIP	EQIP-HU	EQIP-Initiative	EQIP-Initiative-HU
340-6	Adaptive Mgt	<p>Scenario Description: The practice scenario is for the implementation of cover crops in small replicated plots to allow the producer to learn how to manage cover crops on their operation. Scenario includes implementing replicated strip trials on a field plot to evaluate, identify and implement a particular cover crop management strategy (e.g., cover crop vs no cover crop, multiple species vs, single specie, evaluate different termination methods or timings, using a legume vs no legume for nitrogen credits). This will be done following the interim guidance for cover crop adaptive management to be issued to all field offices. After Practice Description: Installation of this scenario will result in establishment of cover crop replicated plots to compare to different management strategies for cover crop management following the guidance in Agronomy Technical Note 10 - Adaptive Management for Conservation Practices and the corresponding Guide Sheet for Implementing Adaptive Management Cover Crop (340) practice, issued July 2014. Implementation involves establishing the replicated plots to evaluate one or more cover crop management strategies. The plot will consist of at least 4 replicated plots designed, laid out, managed and evaluated with the assistance of a consultant knowledgeable in cover crop management. Results are used to make cover crop management decisions to address erosion and water quality issues. Yields will be measured and statistically summarized following the procedures in Agronomy Technical Note 10 - Adaptive Management. The yields for each plot will be adjusted to the appropriate moisture content. This would be repeated for 3 years.</p>	Area planted	Acre	\$994.86	\$1,492.29	\$1,492.29	\$1,790.75