Back To Table Of Practices

# IOWA
# Environmental Quality Incentives Program (EQIP)

# Mississippi River Basin Healthy Watershed Initiative (MRBI)

# Agriculture's Clean Water Alliance MRBI Project

## *List of Eligible Practices and Payment Schedule FY2014*

*December, 2013*

***EQIP Scenario Booklet Glossary***

**Practice Code Table** – The table of Practices is in alphabetical order. The practice code for each practice has a hot link to the individual Practice Code Scenario Descriptions.

**Conservation Practice Description** – Each Conservation Practice has the Practice code, Livestock or non-Livestock practice and whether structural or vegetative, PRS Unit of Measure, Definition, Purpose and Applicability for the conservation practice from the Iowa Field Office Technical Guide.

**Limitations –** This area will list any limitations a conservation practice may have related to EQIP, i.e., payment limitations, planning considerations, practice requirements, etc.

**Maintenance** – This is the Conservation Practice Lifespan.

**Payment Schedule Headers:**
**ID** – This is a numeric identifier for internal tracking purposes.

**Scenario Name** – Unique name for each scenario.

**Scenario and After Practice Description –** For each Conservation Practice Scenario Name this column provides the **Scenario Description**, **After Practice Description** and may include associated practices.

**Scenario Feature Measure** – This provides additional description of the scenario unit, if different than the scenario unit.

**Scenario Unit** – Unit of measure used for the scenario.

Back To Table Of Practices

**PAYMENT RATE – The payment rate is the amount of financial assistance ($/unit) available through EQIP.**

- **EQIP –** Payment rate is based on 50% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.
- **EQIP – HU –** Payment rate is based on 75% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.
- **Initiative –** Payment rate is based on 75% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.
- **Initiative – HU** - Payment rate is based on 90% of the estimated incurred costs and foregone income (if applicable) associated with practice implementation.

**HU = Historically Underserved: Includes, Beginning Farmers, Limited Resource Farmers, Socially Disadvantaged Farmers, Tribal Farmers. The payment rate is higher for HU producers on most practices. To determine if you are an HU producer go to:**
**http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/people/outreach/slbfr**

**Initiative –** Applications that meet the requirements of a National initiative such as Mississippi River Basin Initiative (MRBI), Seasonal High Tunnel Initiative, Energy Initiative, Organic Initiative, National Water Quality Initiative (NWQI), and Driftless Area Landscape Conservation Initiative (DALCI) use the initiative payment rates.

Back To Table Of Practices

# Table of Practices

| Practice Code | Practice Name |
|---|---|
| 340 | Cover Crop |
| 747 | Denitrifying Bioreactor |
| 590 | Nutrient Management |
| 104 | Nutrient Management Plan – Written |

Back To Table Of Practices

**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 all lands requiring vegetative cover for natural resource protection and/or improvement.

Cover Crop is an annually seeded small grain crop for erosion control purposes, livestock purposes or organic production.

**Limitations:**

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

**Payment Schedule: This practice may be scheduled for 3 consecutive years.**

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 1 | Chemical or Mechanical Kill Species | **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 reach early to mid-bloom before it is terminated; 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 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. 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, 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. | Area Planted | Acre | N/A | N/A | $58.34 | $70.00 |

Back To Table Of Practices

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 2 | Winter Kill Species | **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 resides. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect. | Area planted | Acre | N/A | N/A | $42.21 | $50.65 |
| 3 | 2 Species Mix | **Scenario Description**: This scenario reflects the establishment of a diverse mix of cover crops consisting of two or more species which can include a combination of grasses, legumes, forbs, or other herbaceous plants. Cover crop will be planted 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 should be allowed to generate as much biomass as possible, without delaying planting of the following crop. The cover crop will be terminated using approved chemical and/or mechanical methods. **After Practice Description**: Within 30 days after harvest of row crop, fields are planted with a diverse mix of cover crop species. 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. Wind erosion is reduced by standing residues. The cover crop is terminated with approved chemical and/or mechanical methods prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved at an accelerated pace due to the diversity in additional biomass and ground cover which provides increased 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. | Area planted | Acre | N/A | N/A | $68.67 | $82.40 |
| 4 | 3 Species or More Mix | **Scenario Description**: This scenario reflects the establishment of a diverse mix of cover crops consisting of three or more species which can include a combination of grasses, legumes, forbs, or other herbaceous plants. Cover crop will be planted 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 should be allowed to generate as much biomass as possible, without delaying planting of the following crop. The cover crop will be terminated using approved chemical and/or mechanical methods. **After Practice Description**: Within 30 days after harvest of row crop, fields are planted with a diverse mix of cover crop species. The cover crop is seeded with a no-till drill or other approved method. 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. Wind erosion is reduced by standing residues. The cover crop is terminated with approved chemical and/or mechanical methods prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved at an accelerated pace due to the diversity in additional biomass and ground cover which provides increased soil infiltration, and plant diversity introduced to the cropping system. Cover crop residues left on the surface may maximize weed control by | Area planted | Acre | N/A | N/A | $73.58 | $88.29 |

Back To Table Of Practices

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | increasing allelopathic and mulching effect. | | | | | | |

| ID | Scenario Name | Scenario & **After Practice Description** | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 5 | Organic Cover Crop | **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 (within 30 days), 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 no-till 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.), a minimum of 3 weeks prior to planting the subsequent crop. This scenario REQUIRES use of Certified Organic Seed according to NOP rules. **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 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 resides. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect. | Area planted | Acre | N/A | N/A | $121.87 | $146.24 |

Back To Table Of Practices

**DENITRIFYING BIOREACTOR**
**Practice Code 747**

**Livestock Management Practice**

***PRS Unit of Measurement: Acre***

**Definition:** A structure containing a carbon source installed to intercept subsurface drain (tile) flow or ground water, and reduce the concentration of nitrate-nitrogen.

**Purpose:** To improve water quality by reducing the nitrate-nitrogen content of subsurface drain flow and ground water.

**Applicability:** This practice applies to sites where there is a need to reduce the concentration of nitrate-nitrogen of subsurface drain flow or groundwater.

**Limitations:**

**Maintenance: Practice must be maintained for a lifespan 10 year.**

Back To Table Of Practices

**Payment Schedule:**

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 1 | Denitrifying Bioreactor | **Scenario Description**: Scenario describes a structure containing a carbon source installed to intercept subsurface drain (tile) flow or ground water, and reduce the concentration of nitrate-nitrogen. Woodchips serve as the carbon source necessary to the denitrification process. This bioreactor has geotextile fabric (or polyethylene - PE) between the wood chips and the surrounding soil plus the following components: woodchip filled pit, a soil cover, two water control structures (to allow management of the flow rate and free water elevation within the bioreactor), and piping to convey water to and from the bioreactor. Woodchips serve as the carbon source necessary to the denitrification process.<br>**Associated Practices:** Subsurface Drain (606), Structure for Water Control (587), Drainage Water Management (554).<br>Resource concern: Water Quality Degradation - Excess nutrients in surface and ground waters.<br>Management and maintenance of the bioreactor (including chip replenishment), as well as monitoring and reporting to demonstrate the performance of the practice is not included in this scenario. **After Practice Description**: Bioreactor has geotextile fabric (or polyethylene - PE) between the wood chips and the surrounding soil plus the following components: woodchip filled pit, a soil cover, two water control structures (to allow management of the flow rate and free water elevation within the bioreactor), and piping to convey water to and from the bioreactor. The approximate bioreactor excavated pit volume is 333 cubic yards (e.g. 6 feet deep, 15 feet wide and 100 feet long). Woodchips occupy the lower 4 feet of the pit (222 cu. yd.) and a soil blanket over the woodchips is 2.0 ft. and will be mounded above ground level to shed precipitation. A geotextile fabric (or PE material) surrounds the chips to prevent migration of soil into the pit. Water control structures should be installed using practice standard (587) Structure for Water Control. Two inline water control structures are in place. Upper WCS connected to the upper 6" diameter single-wall CPT manifold pipe (15' each, note that 6" HDPE dual wall is the only type available and used in the scenario components) by 6" diameter dual wall pipe (20" each). 20' of 6" dual wall pipe connects the downstream manifold to the lower WCS which is connected back to the main with additional 20' of 6" dual wall pipe. Flow rates are dependent upon the availability of drainage water from the 10" drainage mainline. 40" of mainline is replaced with non-perforated 10" above and below the upper WCS. The soil excavated from the pit is spoiled onto the nearby field. **Associated Practices:** Subsurface Drain (606), Structure for Water Control (587), Drainage Water Management (554). | Volume of Carbon Source | Cubic Yard | N/A | N/A | $43.22 | $51.86 |

Back To Table Of Practices

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 2 | Denitrifying Bioreactor, No Liner | **Scenario Description**: Scenario describes a structure containing a carbon source installed to intercept subsurface drain (tile) flow or ground water, and reduce the concentration of nitrate-nitrogen. Woodchips serve as the carbon source necessary to the denitrification process. This bioreactor has the following components: woodchip filled pit, a soil cover, two water control structures (to allow management of the flow rate and free water elevation within the bioreactor), and piping to convey water to and from the bioreactor. Woodchips serve as the carbon source necessary to the denitrification process.<br>**Associated Practices:** Subsurface Drain (606), Structure for Water Control (587), Drainage Water Management (554).<br>Resource concern: Water Quality Degradation - Excess nutrients in surface and ground waters.<br>Management and maintenance of the bioreactor (including chip replenishment), as well as monitoring and reporting to demonstrate the performance of the practice is not included in this scenario. **After Practice Description**: Bioreactor has the following components: woodchip filled pit, a soil cover, two water control structures (to allow management of the flow rate and free water elevation within the bioreactor), and piping to convey water to and from the bioreactor. The approximate bioreactor excavated pit volume is 333 cubic yards (e.g. 6 feet deep, 15 feet wide and 100 feet long). Woodchips occupy the lower 4 feet of the pit (222 cu. yd.) and a soil blanket over the woodchips is 2.0 ft. and will be mounded above ground level to shed precipitation. A geotextile fabric (or PE material) surrounds the chips to prevent migration of soil into the pit. Water control structures should be installed using practice standard (587) Structure for Water Control. Two inline water control structures are in place. Upper WCS connected to the upper 6" diameter single-wall CPT manifold pipe (15' each, note that 6" HDPE dual wall is the only type available and used in the scenario components) by 6" diameter dual wall pipe (20" each). 20' of 6" dual wall pipe connects the downstream manifold to the lower WCS which is connected back to the main with additional 20' of 6" dual wall pipe. Flow rates are dependent upon the availability of drainage water from the 10" drainage mainline. 40" of mainline is replaced with non-perforated 10" above and below the upper WCS. The soil excavated from the pit is spoiled onto the nearby field. **Associated Practices:** Subsurface Drain (606), Structure for Water Control (587), Drainage Water Management (554). | Volume of Carbon Source | Cubic Yard | N/A | N/A | $37.25 | $44.70 |

Back To Table Of Practices

**NUTRIENT MANAGEMENT**
**Practice Code 590**

**Non-Livestock Management Practice**

***PRS Unit of Measurement:*** **Acre**

**Definition:** Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments.

**Purposes:**

- To budget, supply, and conserve nutrients for plant production.
- To minimize agricultural nonpoint source pollution of surface and groundwater resources.
- To properly utilize manure, municipal and industrial biosolids, and other organic by-products as plant nutrient sources.
- To protect air quality by reducing odors, nitrogen emissions (ammonia, oxides of nitrogen), and the formation of atmospheric particulates.
- To maintain or improve the physical, chemical, and biological condition of soil.
-

**Applicability:** This practice applies to all lands where plant nutrients and soil amendments are applied.

**Enhanced Level Options: For enhance levels apply 2 from the list below:**

1) Apply N in-season – including a split application - according to ISU PM1714 “Nitrogen Fertilizer Recommendations for Corn in Iowa”. Optionally use the Late Spring Nitrate Test to evaluate soil N or ISU PM-2026 “Sensing Nitrogen Stress in Corn” and document how the side-dress rate decision was made.
2) Utilize legumes other than soybeans in rotation.
3) Utilize fall stalk tests to evaluate Nitrogen management (source, rate, timing, and placement) and document how this information will affect future N management. (Required for adaptive management scenario)
4) Apply manure at P based rates when PI is low or very low.
5) a. Variable rate manure or commercial fertilizer within field based on soil tests.

OR

b. Use of Site Specific Nutrient Applications using GPS/satellites and variable rate (accutract) nutrient applications.
6) Apply N after July 15 on pasture or no N on Pasture.
7) When applying >60# N on pasture that has <30% legume, use split application.
8) Utilize a slow release N such as a polymer coated urea (ex. ESN)
9) Utilize nitrapyrin with fall applied anhydrous ammonia.
10) Inject manure with low disturbance, minimum of 30 inch spacing without covering disks.

**Limitations:** All categories with enhancements require the following 1) If associated with irrigated land must also apply 449 Irrigation Water Management, 2) If associated with drained land must also apply 554 Drainage Water Management if feasible.
**Nutrient Management is capped (lifetime) at $16,000/Participant and $24,000/Historically Underserved Participant.**

**Maintenance: Practice must be maintained for a lifespan of 1 year.**

**Payment Schedule: This Payment is available for the first 3 consecutive years that the activities are applied. If the activities are only applied every other year in a rotation, the payment would be scheduled for those years.**

Back To Table Of Practices

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 4 | Enhanced NM | **Scenario Description**: This scenario describes a conventional cropping system where either no nutrient management or only a basic level of nutrient management is being practiced. An enhanced nutrient management system includes activities such as split applications, multiple nutrient concentration tests (other than only soil tests) and methods that more concisely enable scheduling of appropriate fertilizer applications. Nutrients are transported to surface waters through runoff or wind erosion in quantities that degrade water quality and limit use of intended purposes. Inefficient energy utilization occurs due to traditional methods and forms of fertilizer applications. **After Practice Description**: Plan Development:<br>• The development and implementation of a Nutrient Management Plan (NMP) that meets and exceeds the NRCS 590 standard will benefit plant productivity and reduce off-site movement of nutrients.<br>• The NMP will stress the use of the four R's (Right Source of Nutrients, Right Time of Application, Right Rate, and Right Method of Application).<br>• These include practices such as use of split applications, slow release nutrients, proper timing of application, more appropriate formulations, banding, etc.<br>• A nutrient budget is developed for each field or section of field annually.<br>• Further minimization of risk is accomplished by identifying the variability across the field(s) by using soil survey maps or other simple techniques to establish zones, along with zonal soil testing.<br>Testing/Nutrient data collection:<br>• The use of pre-plant soil tests will assist with the development of the annual nutrient budget in accordance with Land Grant University fertilizer guides.<br>• Soil testing is completed according to Land Grant University (LGU) recommendations.<br>• Use of a post-harvest soil test (interpreted by a crop consultant) will help establish the adequacy of the plan in meeting crop needs while minimizing P application rate and residual N, thus reducing the potential for off-site impacts.<br>• Analysis is completed at least once every three years for N-P-K (soil tests).<br>Producer Activities/Equipment Needed:<br>• Applications of nutrients are completed using a GPS guided variable rate fertilizer applicator.<br>• Application of nutrients via fertilizers, and/or manures applied in a manner that minimizes nutrient runoff and leaching.<br>• Application rates of all sources of nutrients are based upon soil tests and either LGU recommendations, crop removal rates, or industry standard.<br>• Record keeping will document application of nutrients based on the 4 R's.<br>• Nutrients are applied at rates based on soil test zone analyses. | 0 | Acre | N/A | N/A | $29.01 | $34.81 |

Back To Table Of Practices

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 5 | Enhanced NM with Manure | **Scenario Description**: This scenario describes a conventional cropping system where either no nutrient management or only a basic nutrient management is being practiced. Manure is applied in addition to commercial fertilizer. An enhanced nutrient management system includes split applications and multiple nutrient concentration tests (other than only soil tests) and methods that more concisely enable scheduling of appropriate fertilizer applications. Nutrients are transported to surface waters through runoff or wind erosion in quantities that degrade water quality and limit use of intended purposes. Inefficient energy utilization occurs due to traditional methods and forms of fertilizer applications. **After Practice Description**: Plan Development<br>• The development and implementation of a Nutrient Management Plan (NMP) that meets and exceeds the NRCS 590 standard will benefit plant productivity and reduce off-site movement of nutrients.<br>• The NMP will stress the use of the four R's (Right Source of Nutrients, Right Time of Application, Right Rate, and Right Method of Application).<br>• These include practices such as use of split applications, slow release nutrients, proper timing of application, more appropriate formulations, banding, etc.<br>• A nutrient budget is developed for each field or section of field annually.<br>Testing/Nutrient data collection<br>• Soil testing is completed according to LGU recommendations.<br>• Analysis is completed at least once every three years for N-P-K (soil tests).<br>• The use of pre-plant soil tests will assist with the development of the annual nutrient budget in accordance with Land Grant University fertilizer guides.<br>• Use of a post-harvest soil test and manure tests (interpreted by a crop consultant) will help establish the adequacy of the plan in meeting crop needs while minimizing P application rate and residual N, thus reducing the potential for off-site impacts.<br>• Further minimization of risk is accomplished by identifying the variability across the field(s) by using soil survey maps or other simple techniques to establish zones, along with zonal soil testing.<br>Producer Activities/Equipment Needed<br>• Applications of nutrients are completed using a GPS guided variable rate fertilizer applicator. Record keeping will document application of nutrients based on the 4 R's. Nutrients and manure are applied at rates based on soil test zone analyses. Typical treatment area is 40 acres.<br>• Application of nutrients via fertilizers, and/or manures applied in a manner that minimizes nutrient runoff and leaching.<br>• Application rates of all sources of nutrients are based upon soil tests and either LGU recommendations, crop removal rates, or industry standard. | 0 | Acre | N/A | N/A | $37.68 | $45.22 |

Back To Table Of Practices

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 6 | Enhanced NM with Tissue Testing | **Scenario Description**: This scenario describes the implementation of an advanced precision nutrient management system on cropland. The planned NM system will meet the current 590 standard. Payment for implementation is to defray the costs of soil testing, analysis, consultant services, skilled labor and specialized nutrient application that provide nutrient proper recommendations based on Land Grant University (LGU) recommendations or crop removal rates and an associated nutrient budget, recordkeeping, and monitoring on a precision level that includes split applications, Normalized Differential Vegetation Index (NDVI) sensing, and aerial imaging. Records are kept demonstrating implementation of the 4 R's of the NM plan. This scenario goes beyond the enhanced system by using technologies that improve efficiency and effectiveness of nutrient management by utilizing specialized precision techniques and tools (variable rate applicators, NDVI, aerial photography, yield monitoring, plant tissue testing). Precision nutrient mgmt techniques ensure that the right rate, proper timing, and proper placement of nutrients minimize non-point source pollution and provide proper amounts of nutrients to the crop where it is needed and not applying where it is not needed. **After Practice Description**: Plan Development<br>• An application rate (prescription) is developed for each zone based on representative soil analysis and a zone nutrient budget.<br>• A nutrient budget is developed for each field annually.<br>• Yield monitoring maps will be collected and utilized (where technology allows) to develop the following year nutrient applications. Testing/Nutrient Data Collection<br>• Soil testing is completed in a fashion that provides a representative assessment of nutrient concentrations in each field or planning unit including zone directed sampling, real time Normalized Differential Vegetation Index (NDVI) sensing, Electrical Conductivity (EC) Index type sampling, or via high definition aerial photography that allows for the identification of numerous variations (zones) in a planning unit.<br>• Zone maps are created and a nutrient budget developed for each zone.<br>• Soil testing is completed annually for N and at least once every three years for P-K. Plant tissue samples collected and evaluated. Producer Activities/Equipment Needed<br>• Application of nutrients is completed so that non-point source pollution is minimized.<br>• Nutrients are applied based on realistic yield expectations.<br>• The average field size is >=40acres.<br>• Applications of nutrients are completed using a GPS guided variable rate fertilizer applicator.<br>• Applications of nutrients will be completed in split applications where a majority of the N needs are applied based on the needs of the crop based on growing season requirements.<br>• Record keeping will include all soil tests, analysis, zone maps, nutrient prescriptions and budgets, and as-applied applications. | 0 | Acre | N/A | N/A | $51.35 | $61.62 |

Back To Table Of Practices

**NUTRIENT MANAGEMENT PLAN - WRITTEN**
**Practice Code 104**

***PRS Unit of Measurement:*** **Number**

**Definition:** Nutrient management plans are documents of record of how nutrients will be managed for plant production and to address the environmental concerns with the offsite movement of nutrients. These plans are prepared in collaboration with producer and/or landowner and are designed to help the producer with implementation and maintenance activities associated with the plan.

A Nutrient Management conservation activity plan must:
a. Meet NRCS quality criteria for soil erosion (sheet, rill, wind, and ephemeral/concentrate flow erosion), water quality and quantity, and other identified resource concerns;
b. Be developed in accordance with technical requirements of the NRCS Field Office Technical Guide (FOTG) and policy requirements of General Manual, Title 190, Part 402, Nutrient Management; and guidance contained in the National Agronomy Manual, Subpart 503C.
c. Comply with federal, state, tribal, and local laws, regulations and permit requirements; and
d. Satisfy the operator's objectives.

**Purposes:** The Nutrient Management Plan shall address the resource concerns identified and the conservation practices needed to comprise a conservation system. Document the planned conservation practices, the site specific specifications for the practice, the amount to be applied, and schedule of application.

**Applicability:** On lands in Iowa that will benefit from the development and implementation of a Nutrient Management Plan.

**Limitations:**

**Maintenance: Practice must be maintained for a lifespan of 1 year.**

Back To Table Of Practices

**Payment Schedule:**

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 1 | Nutrient Management CAP Less Than or Equal to 100 Acres | **Scenario Description**:<br>Various on-farm land uses where natural or artificial amendments are applied. Natural Resource Concern: Water Quality, Soil Erosion, Water Quantity, and other associated resource concerns.<br>**Before Situation**:<br>Agricultural producer has no plan or minimal knowledge for applicant and management of. The producer currently manages nutrient application based upon label instructions, personal knowledge, or other local criteria. Producer is interested in management of nutrients to maximize yields, profits margin, reduce costs, and for environmental benefit. Producer is willing to collaborate with a certified TSP to develop a plan. **Associated Practices:** 328, 340, 330, 554, 329, 345, 346, 412, 449, 585, 600, 332, 390, 391, 393, 601, 635, 656, 657, 658, 659, 747, 511, 362, 386, 410, 447, 587, 633, 638 or other applicable practices approved in the NRCS Field Office Technical Guide.<br>**After Situation:**<br>After EQIP contract approval, participant has obtained services from a certified TSP for develop of the "Nutrient Management" conservation activity plan. The CAP criteria requires the plan to meet quality criteria for the primary Water Quality resource concern and other applicable resource concerns and provides for opportunities to manage nutrients for plant production and address offsite movement of nutrients. The CAP plan may include recommendations for associated conservation practices which address other related resource concerns. CAP meets the basic quality criteria for the 104 plan as cited in the NRCS Field Office Technical Guide. | Number | Number | $1,665.53 | $1,998.63 | | |
| 2 | Nutrient Management CAP 101 - 300 Acres | **Scenario Description**:<br>Various on-farm land uses where organic or inorganic amendments are applied. Natural Resource Concern: Water Quality, Soil Erosion, Water Quantity, and other associated resource concerns.<br>**Before Situation**:<br>Agricultural producer has no plan or minimal knowledge for applicant and management of. The producer currently manages nutrient application based upon label instructions, personal knowledge, or other local criteria. Producer is interested in management of nutrients to maximize yields, profits margin, reduce costs, and for environmental benefit. Producer is willing to collaborate with a certified TSP to develop a plan. **Associated Practices:** 328, 340, 330, 554, 329, 345, 346, 412, 449, 585, 600, 332, 390, 391, 393, 601, 635, 656, 657, 658, 659, 747, 511, 362, 386, 410, 447, 587, 633, 638 or other applicable practices approved in the NRCS Field Office Technical Guide.<br>**After Situation:**<br>After EQIP contract approval, participant has obtained services from a certified TSP for develop of the "Nutrient Management" conservation activity plan. The CAP criteria requires the plan to meet quality criteria for the primary Water Quality resource concern and other applicable resource concerns and provides for opportunities to manage nutrients for plant production and address offsite movement of nutrients. The CAP plan may include recommendations for associated conservation practices which address other related resource concerns. CAP meets the basic quality criteria for the 104 plan as cited in the NRCS Field Office Technical Guide. | Number | Number | $1,982.36 | $2,378.83 | | |

Back To Table Of Practices

| ID | Scenario Name | Scenario & After Practice Description | Scenario Feature Measure | Scenario Unit | EQIP | EQIP-HU | EQIP-Initiative | EQIP-Initiative-HU |
|---|---|---|---|---|---|---|---|---|
| 3 | Nutrient Management CAP Greater Than 300 Acres | **Scenario Description**:<br>Various on-farm land uses where organic or inorganic amendments are applied. Natural Resource Concern: Water Quality, Soil Erosion, Water Quantity, and other associated resource concerns.<br>**Before Situation**:<br>Agricultural producer has no plan or minimal knowledge for applicant and management of. The producer currently manages nutrient application based upon label instructions, personal knowledge, or other local criteria. Producer is interested in management of nutrients to maximize yields, profits margin, reduce costs, and for environmental benefit. Producer is willing to collaborate with a certified TSP to develop a plan. **Associated Practices:** 328, 340, 330, 554, 329, 345, 346, 412, 449, 585, 600, 332, 390, 391, 393, 601, 635, 656, 657, 658, 659, 747, 511, 362, 386, 410, 447, 587, 633, 638 or other applicable practices approved in the NRCS Field Office Technical Guide.<br>**After Situation:**<br>After EQIP contract approval, participant has obtained services from a certified TSP for develop of the "Nutrient Management" conservation activity plan. The CAP criteria requires the plan to meet quality criteria for the primary Water Quality resource concern and other applicable resource concerns and provides for opportunities to manage nutrients for plant production and address offsite movement of nutrients. The CAP plan may include recommendations for associated conservation practices which address other related resource concerns. CAP meets the basic quality criteria for the 104 plan as cited in the NRCS Field Office Technical Guide. | Number | Number | $2,397.89 | $2,877.47 | | |