

NUTRIENT MANAGEMENT (CSP Enhancements)

FEBRUARY 2006

Enhancement Activity Job Sheet

AL-CSP-ENM-JS



Photo courtesy of NRCS

Enhancement Activities

Enhancements activities refer to actions that provide resource benefits beyond the level prescribed by NRCS Conservation Practice Standards. Once implemented Enhancement Activities should result in an observable or measurable improvement to the condition of one or more of the soil, water, air, plant, or animal resources, or provide for more efficient resource utilization and/or energy conservation.

Enhancement Activity Benefits

Enhancement activities associated with Nutrient Management such as applying nitrogen fertilizers using split applications, utilizing annual soil and manure testing, using precision agricultural techniques, or timing manure application can result in the following benefits to the producer and the environment:

- Cleaner ground and surface water

- Reduced costs
- Improved soil health
- Improved yields

CSP Payments

You can earn payments by participating in any of the following activities:

- Optimizing application of lime and fertilizer by using precision agriculture techniques.
- Minimize nitrogen losses and amount needed by applying nitrogen using split application.
- Utilizing annual soil test and annual manure test results to maximize production and reduce nutrient losses.
- Minimize nitrogen and phosphorus losses from animal manures by optimizing application timing.
- Utilizing legume cover crops to provide nitrogen, crop residue, and plant diversity.

CSP Enhancements earnings are subject to payment caps. Your actual payment will depend on your CSP Tier level and the number of acres enrolled.



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Client's Acknowledgement Statement:

I have elected to use the following Nutrient Management activities and understand the requirements of the selected activities (Check all that apply):

- To optimize application of lime and fertilizer use precision agriculture techniques.
- To minimize losses and amount apply nitrogen using split application.
- Utilize annual soil test and annual manure test results to maximize production and reduce nutrient losses.
- Minimize nitrogen and phosphorus losses from animal manures by optimizing application timing.
- Utilize legume cover crops to provide nitrogen, crop residue, and plant diversity.

I agree that the following information will be provided to NRCS upon request:

- Written documentation of the activity performed (use attached worksheets or equivalent).
- Copies of dated receipts for equipment or services purchased.

I understand that CSP Enhancements earnings are subject to payment caps and that my actual payments will depend on my CSP Tier level and the number of acres enrolled.

I understand that it is my responsibility to obtain all necessary permits and to comply with all ordinances and laws pertaining to the application of these activities.

Accepted by: /s/ _____ Date: _____



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Worksheet 1 - Adopt Precision Agriculture Techniques ENM04

Payment = \$8/acre/crop year to use precision ag techniques (grid soil sampling, yield monitoring and GPS controlled guidance and delivery systems e.g., John Deere AutoTrac, New Holland IntelliSteer, Case/IH AgGPS® Autopilot) to optimize the application of lime and fertilizer. Payments will be made when at least 3 of these four major components are used.

Precision Ag technology consists of four major components:

- **Global Positioning System (GPS) receiver** - Using Earth-orbiting satellites GPS receivers translate radio signals into precise geographic coordinates on the targeted cropland.
- **Yield monitoring Systems (YMS)** - Yields in the field are measured using combine-mounted sensors or volume meters. A GPS receiver mounted on the combine supplies coordinates so that estimates of yields can be assigned to small areas of a field to create a yield map.
- **Digital soil map (DSM)**- Fields divided into grid cells of approximately 2-3 acres are soil sampled and the data from each cell is transferred to a digital map that is then used to manage precise fertilizer and/or lime input applications.
- **Variable rate application technologies (VRT)** - Computer-controlled equipment continually adjusts fertilizer and/or lime applications based on soil grid data. The GPS receiver enables the computer to recognize where it is in the field and adjust the types and amounts of inputs according to the soil fertility maps.

Use this (or similar) table to document where Precision Ag techniques are used.

Tract & Field #s	Acres	Crop Grown	Type of System and Components Used	Crop Year Used
T123 Field 4	180 Example	Corn	John Deere AutoTrac, VRT, YMS, GPS	2005

Attach receipts for precision ag equipment or services.

Precision Agriculture Techniques Certification

I certify that I have used Precision Agriculture techniques to apply fertilizer and/or lime on the fields listed in the table above.



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Worksheet 3 - Annual Soil and Manure Test ENM07

Payment = \$6/Acre/crop year to utilize results of analysis of annual manure (if applied), and soil tests to maximize production, minimize nutrient application rates, and reduce nutrient losses.

Utilize annual soil test and annual manure test results to maximize production and reduce nutrient losses. Nutrient applications for each crop will be based on annual soil test results and recommendations from a University or other accepted certified laboratories. Where animal manures are used as nutrient sources, the source materials will be laboratory analyzed for nutrient content at least annually. Follow the Nutrient Management 590 standard.

Use this (or similar) table to document location and soil, or manure testing results used to customize nutrient inputs.

Tract & Field #s	Acres	Crop Grown	Type of Test Utilized	Crop Year
T123 Field 3	80	Example Cotton	Soil Test	2004

Attach soil, or manure test results for the fields listed above.

Soil or Manure Test Certification

I certify that I have tested either the soil or applied manure and have used the test results to customize nutrient applications on the fields listed in the table above.

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Worksheet 4 – Optimizing Timing of Manure Application ENM30

Payment = \$20/Acre/crop year to optimize timing of application of animal manures on cropland, hayland or pastureland to minimize nitrogen and phosphorus losses. Rates of application will not exceed NRCS Nutrient Management Standard Guidelines.

Animal manures will be applied for annual summer crop production no earlier than 14-21 days prior to planting. For winter annuals (wheat, rye, and annual rye grass) apply September 1 - 30. For cool season grasses (fescue, orchard, ryegrass) apply March 15 - April 15 and/or September 1 - 30. For warm season grasses (bermudas) apply April 1 - 30 for first application and June 15 - July 15 for second (if applying twice) This can be accomplished by utilizing field or farm storage of manure, purchasing manure near time of need, and/or by scheduling with a vendor to deliver or apply near the time of need. Follow the Nutrient Management 590 Standard.

Use this (or similar) table to document the location, date, acres, crop, and manure amount.

Tract & Field #s or Names	Acres	Crop	Date and amount of 1 st application	Date and amount of 2 nd application for WSG or CSG
T486 - 1	120 Example	Cotton	2 tons - 4/15	N/A
T486 - 5	30 Example	Bermuda Hay	2 tons - 4/1	2 tons - 6/15

Timing of Manure Application Certification

I certify that I have applied manure at the time and rate and on the crops and fields as shown in the table above.



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Worksheet 5 - Plant Legume Cover Crops ENM21

Payment = \$20/Acre for the use of legume cover crops to provide nitrogen, crop residue, and plant diversity in row crop systems.

Utilize legume cover crops to provide nitrogen, crop residue, and plant diversity. Plant clovers or vetches to provide a portion of the next crops nitrogen and to provide winter cover. Follow the Nutrient Management 590 and Cover Crop 340 standards.

Use this (or similar) table to document the location, date, acres, and legume cover crop grown.

Tract & Field #s	Acres	Row Crop Grown	Legume Cover Crop	Crop Year
T123 Field 3	⁸⁰ Example	Cotton	Crimson Clover	2004

Attach receipts for seed.

Use of Legume Cover Crop Certification

I certify that I have used legume cover crops on the field(s) listed in the table above.

Name: _____ Date: _____