

Enhancement Sheets

Nutrient Management Enhancements for 2004 Contracts

Minnesota, 2005

Band apply commercial Phosphorus applications or incorporate broadcast applications within 24 hours. (ESM CS4)

Definition

The producer must place P_2O_5 commercial fertilizer below the soil surface in proximity to the seed or root zone. This includes deep banding, point injection, and starter applications.

Purpose

This will reduce the amount of applied P_2O_5 needed by crops. This will also reduce potential for off-site transport of phosphorus.

Where Used

- On fields requiring P_2O_5 applications according to University of Minnesota Fertilizer recommendations.
- For crops that have a drill or row P_2O_5 recommendation in University of Minnesota Fertilizer Recommendations.
- Most beneficial on soils testing low in phosphorus.

Operation and Maintenance

- Follow University of Minnesota recommended procedures when placing fertilizer near the seed.

Payment

A payment all fields that will receive a P_2O_5 application during that year. Each application must meet criteria.

Documentation Required

NRCS-Minnesota Form MN-CPA-046 dtd. 1/ 04 (Practices Certification/Recordkeeping Form) or a similar form.

Signature _____ Date _____

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Minnesota, 2004

The operator manages filter strips on all fields adjacent to or within 1000 feet of permanent streams and lakes

Definition

Strip of herbaceous vegetation installed according to USDA-NRCS standards and specifications.

Purpose

Filter or infiltrate potential contaminants in runoff moving towards surface waters.

Where Used

On the lower edge of fields.

Operation and Maintenance

See USDA NRCS-Minnesota Standard 393- Filter Strips. Annual clipping and vegetation removal is recommended outside of the primary nesting season. Grazing is not allowed if the filter strip is being used to comply with Minn. Land Application of Manure Rules.

Payment Rate

A payment per acre in the filter strip.

Documentation Required

Signed Minnesota Job Sheet 393 found in Conservation practice Standard 393 filter strip. Submit the 1st year of the contract or 1st year of the practice installation.

Signature _____ Date _____

*****This enhancement does not apply to filter strips receiving Continuous Conservation Reserve Program (CCRP) payments for filter strips.**

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The operator injects or incorporates all manure applications within 24 hours.

Definition

All manure is sub-surface applied or broadcast and incorporated within 24 hours.

Purpose

Reduce amount of nitrogen volatilized to the atmosphere. Reduce potential for phosphorus and potential disease causing organisms to move with surface runoff towards water bodies.

Where Used

Statewide when soil and moisture conditions allow injection or immediate incorporation. This enhancement is not allowed on frozen, snow covered or actively thawing ground.

Operation and Maintenance

No additional instructions.

Payment

A payment per acre on acres where manure is applied.

Documentation Required

NRCS-Minnesota Form MN-CPA-046 dtd. 1/ 04 (Practices Certification/Recordkeeping Form) or a similar form.

Signature _____ Date _____

Enhancement Sheets

Nutrient Management Enhancements for 2004 Contracts

Minnesota, 2004

Manage livestock feed to reduce excreted or wasted nitrogen and/or phosphorus

Definition

Managing the quantity of available nutrients fed to livestock and poultry.

Purpose:

Supply nutrients required by livestock and poultry for maintenance, production, performance, and reproduction; while reducing the quantity of nutrients, especially nitrogen and phosphorus, excreted in manure

Where Used

Livestock and poultry operations

Operation and Maintenance

Various feed management options are available dependent on animal species.

Following is a partial list:

- Grouping animals of similar ages, weights, sex and/or production levels together. Split sex feeding.
- Phase feeding-using multiple phase feeding versus minimal phase feeding.
- Know the availability of nutrients in feed. Formulate diets based on this information and do not exceed National Research Council (NRC) nutrient recommendations unless on-farm data for nutrient requirements of specific genetic lines of animals is known.
- Use phytase and reduce supplemental phosphorus content of swine and poultry diets
- Reduce dietary protein content and add synthetic amino acids to swine and poultry diets
- Remove all or most of the supplemental P in beef and dairy cattle diets
- Use highly digestible feeds, as appropriate, in the diet.
- Use selected enzymes or other products to enhance feed digestibility or feed use efficiency.

Routinely analyze feed for nitrogen and phosphorus content.

Routinely analyze manure to determine impacts of feed management program.

Payment

A payment per animal unit per year for which the livestock feed is managed.

Documentation Required

Records of feed analysis and ration formulation, including the record of ration formulation used prior to implementing the feeding strategy

Other information that documents the above.

Signature _____ Date _____

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N-inhibitor is used on labeled crops when spring pre-plant commercial nitrogen is applied to poorly drained wet soils or when early side-dressed or split commercial nitrogen applications are applied on coarse textured soils.

Definition

An N-inhibitor is applied with commercial nitrogen fertilizer to decrease denitrification or leaching losses of nitrogen.

Purpose

Reduces potential for nitrate N to leach below the root zone or denitrify.

Where Used

- Mainly on corn.
- With Anhydrous ammonia and occasionally Urea. Can be used with Urea Ammonium Nitrate (UAN) with early sidedressed N applications
- Early sidedressed nitrogen on coarse-textured soils
- Pre-plant nitrogen applications on poorly drained soils with high soil moisture levels near the soil surface
- Fields requiring an N application according to University of Minnesota Fertilizer Recommendations

Operation and Maintenance

- Urea impregnated with an N-Inhibitor should be immediately incorporated
- Read label instructions on products containing N-inhibitors. Some products should not be applied through an irrigation system. Some products should not be applied with dry fertilizers containing nitrate such as ammonium nitrate (AN), potassium nitrate or calcium nitrate.

Payment

A payment per acre on all fields that receive the N-inhibitor during the year.

Documentation Required

NRCS-Minnesota Form MN-CPA-046 dtd. 1/ 04 (Practices Certification/Recordkeeping Form-use the pesticide section) or a similar form. Application information is entered on the pesticide section.

Signature _____ Date _____

Enhancement Sheets

Nutrient Management Enhancements for 2004 Contracts

Minnesota, 2004

No manure applications on fields adjacent to or within 1000 feet of lakes and permanent streams when those fields have Soil test Phosphorus (STP) levels > 75 ppm Bray P1 (60 ppm Olsen)

Definition

Manure is not applied to fields in close proximity to surface waters when those fields have high STP levels.

Purpose

Reduce potential for phosphorus and pathogen movement in runoff towards water bodies.

Where Used

Livestock operations.

Operation and Maintenance

No further instructions

Payment Rate

A payment per acre on all fields meeting the criteria.

Documentation Required

NRCS-Minnesota Form MN-CPA-046 dtd. 1/ 04 (Practices Certification/Recordkeeping Form) or a similar form plus indicate on a map where the field(s) is located.

Signature _____ Date_____

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Side dress or split commercial nitrogen fertilizer applications (spring preplant and side dress) are used on coarse textured soils.

Definition

Nitrogen fertilizer is applied spring-pre-plant or post-plant or both. The fertilizer is sub-surface applied or broadcast and incorporated within 24 hours.

Purpose:

Increase nitrogen efficiency use by crops and decrease amount of nitrate available to move below the root zone prior to crop uptake.

Where Used

To crops requiring nitrogen applications according to University of Minnesota Fertilizer Recommendations

Operation and Maintenance

- Sidedress apply to corn before it is 12 inches high.
- Inject or incorporate sidedress applications of urea and UAN to a minimum depth of 4 inches.

Payment

A payment per acre on acres in which the practice is completed.

Documentation Required

NRCS-Minnesota Form MN-CPA-046 dtd.1/ 04 –Practices Certification Recordkeeping Form or a similar form.

Signature _____ Date _____



United States Department of Agriculture

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Spring pre-plant commercial nitrogen fertilizer applications used on soil types other than coarse.

Definition

Nitrogen fertilizer is not fall applied but rather applied spring-pre-plant or post-plant or both. The fertilizer is sub-surface applied or broadcast and incorporated within 24 hours.

Purpose:

Increase nitrogen efficiency use by crops and decrease amount of nitrate available to move below the root zone prior to crop uptake.

Where Used

To crops requiring nitrogen applications according to University of Minnesota Fertilizer Recommendations

Operation and Maintenance

- Sidedress applies to corn before it is 12 inches high.
- Inject or incorporate sidedress applications of urea and UAN to a minimum depth of 4 inches.

Payment

A payment per acre on acres in which the practice is completed.

Documentation Required

NRCS-Minnesota Form MN-CPA-046 dtd.1/ 04 –Practices Certification Recordkeeping Form or a similar form.

Signature _____ Date _____

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Use a winter cover crop to capture and retain nutrients for recycling to later crops

Definition

Grasses, fibrous rooted cereal grains or other herbaceous plants established for seasonal cover.

Purpose:

Various purposes including managing excess nutrients in the soil profile.

Where Used

Primarily following crops that are harvested early to allow subsequent cover crop planting with adequate growth prior to freeze up (e.g. corn silage; sweet corn; peas, etc).

Operation and Maintenance

Annual ryegrass, barley, oats, rye, and winter wheat are good choices dependent on planting date. Oats is a good choice when corn will be planted in the spring. Rye is a good choice when soybeans will be planted in the spring. Plant as soon as possible after crop harvest or in some cases immediately following the last cultivation of row crops. Plant no later than September 15. However, NRCS will consider Oct. 1 as the last date for planting on a case by case basis. Terminate growth as late as possible to maximize plant growth and still prepare the seedbed for the subsequent crop.

Payment

A payment per acre per year where there is a winter cover crop in place.

Documentation Required

Indicate seedbed preparation technique, seeding date, fertilization if any and method of termination.

Signature _____ Date _____