CSP Job Sheet N-1

NUTRIENT MANAGEMENT ENHANCEMENT **September 2006**

NEBRASKA

Name: _____

Precision agricultural grid sampling and/or zone management application for N, P Soil Sampling Requirements

Payment = $_____ / Acre / Year to precision apply nitrogen and phosphorus based on grid soil sampling and/or zone management.

Soil Sampling Requirements:

- Geo-referenced (GIS) zone management, grid soil sampling, or a combination of the two methods will be used (i.e. deep nitrate soil sampling on zone management, and surface soil tests for grid sampling).
- Grid soil sampling areas (grids) will be 5 acres or less and geo-referenced zone management soil sampling areas (zones) will be 20 acres or less.
- Geo-referenced zone management, will use soil sampling zones based on GIS yield maps and/or infrared maps, similar cropping practices (i.e. past crops, manure and fertilizer management), and similar site and soil conditions throughout the entire zone (i.e. similar soil texture, soil color, organic matter, slope, drainage, etc.).
- Surface soil tests (0-8 inches) for P, K, pH and micronutrients will be taken at least once every five years.
- Annual deep nitrate soil samples (0-36 inches or deeper on irrigated cropland, and 0-24 inches or deeper on dryland cropland) will be taken from November 1 through the spring every year that corn, milo, or other non-legume spring planted crops (spring tests are required on sandy soils, nitrate tests are not needed for legumes), and August 1 through the early spring for winter wheat.
- All soil samples must be taken prior to applying fertilizer or manure.
- When recent (3 years old or less) deep nitrate soil test values tested low (6 ppm or less), deep nitrate soil samples are not necessary on dryland cropland without manure history.
- Utilize University of Nebraska procedures for soil sampling (Nebguide G91-1000-A “Guidelines for Soil Sampling in Nebraska).

Nutrient Application Requirements:

- All crop nutrients will be precision applied using a variable rate applicator that is geo-referenced.
- Phosphorus will be applied in amounts equal or less than the University of Nebraska recommended rates.
- Nitrogen will be applied at varying rates on each soil sampling area based on University of Nebraska recommendations.
- Fall only nitrogen applications are not allowed for spring/summer planted crops (e.g. soybeans, corn, milo, oats):
- Nitrogen will be applied using one of the following methods/combinations for spring/summer planted crops:

    - spring only applications (winter applications of anhydrous after January 1 are acceptable if conditions are ideal),
    - growing season only applications (i.e. side-dress or chemigation through sprinkler irrigation systems);
    - split application (spring and growing season are required on coarse textured soils i.e. sand, loamy sand, sandy loam soils, fall and growing season acceptable on heavy soils); and/or chemigation through sprinkler irrigation systems (growing season only) for nitrogen in summer row crops.
- To maximize Nitrogen use efficiency, Nitrogen will be applied using one of the following methods/combinations for fall planted small grain (e.g. wheat, rye):
    - split applied (planting time and late winter to early spring),
    - applied in the late winter to early spring.

Documentation Required: Copy of soil tests, and farmer or crop consultant certification of nutrient application with precision agriculture nutrient application based on grid soil sampling and/or geo-referenced zone management. Use the following Tables for documentation of sampling and application. An example is provided to assist you.

Tract & Field #s or Names	Acres represented by zone/grid soil test	Date of zone/grid soil test	Soil test lab #
T486 – 1	15 acre zones	09/01/03	17585
Smith farm – fld#2	Example 3 acre grids	03/01/04	16854
Tract & Field #s or Names	**Acres represented by zone/grid soil test**	**Date of zone/grid soil test**	**Soil test lab #**

Tract & Field #s or Names	Acres	Crop	Nutrient	Application Rate (Range)	Application Method	Date Applied
T486 – 1 Example	120	Wheat	N	40 – 80	Variable rate(VRT)	3/22
T486-1	120	Wheat	P	20	VRT	10/15
Smith farm – fld#2	65	sorghum	N	60	VRT	6//1
Smith farm – fld#2	65	sorghum	P	0 - 40	VRT	4/20
Tract & Field #s or Names	**Acres**	**Crop**	**Nutrient**	**Application Rate (Range**	**Application Method**	**Date Applied**

Certification:

I certify that I have precision applied nitrogen and phosphorus based on grid soil sampling and/or zone management according to this jobsheet to the field(s) listed in the table above.

Name: _____Date:_____