Section 10 Example: Protocols for Manure and Soil Sampling

Soil Sampling

	Field 1 – Pivot (Corn /soybean rotation)	Field 2 – Feedlot Quarter (3 yr alfalfa and 1 yr corn rotation)	Field 3 – Dry Quarter (Corn /soybean rotation)
Frequency and Soil Sampling for N and P	Pooled 8-inch deep soil samples will be collected every five years at a minimum. Field will be divided into quarters will soil samples collected from pivot irrigated areas. Four deep soil sample will be collected each year prior to corn production.	Pooled 8-inch deep soil samples will be collected every five years at a minimum. Field will be divided into three areas from which soil samples collected. Three deep soil sample will be collected each year.	Pooled 8-inch deep soil samples will be collected every five years at a minimum. Three samples will be collected from area west of Yankton Slough and one from area east of slough.. Four deep soil sample will be collected each year prior to corn production.
Sampling Procedures for N and P: (e.g. no. of cores / area, depth, acres / sample area, etc.)	Nebguide G91-1000-A, Guidelines for Soil Sampling, will be used as a basis for all procedures		
Sample Analysis Procedures for N and P:	☒ Soil nitrate ☒ Bray 1 for P ☐ Olsen for P Lab:_____ ☐ Melich III for P ☐ Other:_____		
Source (e.g. UNL) of Nitrogen and Phosphorus Recommendations	UNL Recommendations		

Additional Crop Nutrient Status Measurements

(e.g., other soil nitrate tests, irrigation water tests, chlorophyll meter readings, corn stalk nitrate test)

Test:	Separate stalk nitrate tests will be conducted for irrigated and dryland corn. Tests will be completed every third year

Timing of Selected Activities. Check appropriate months when practice should occur.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
8-inch samples											X	X
Deep soil Samples			X	X								

Manure Sampling

	Manure Handling System: Feedlot Manure Solids	Manure Handling System: Runoff Holding Pond Water
Manure Sampling Frequency:	Two samples taken annually associated with timing of each pen clean out period (typically May and November).	Annually
Sample Collection Procedures: (see publications No. 4 and 7, pg. 40)	Sample associated with May cleanout should be taken from stock piles just prior to land application. Sample associated with November cleanout should be taken at time of spreader loading (typically as pens are cleaned). Procedures defined in NebFact 02-507 "Manure Testing: What to Request?" and Nebguide G02-1450 "A Sampling Manures for Nutrient Analysis" will be followed.	One sample will be collected annually, typically during first pump out event in spring. Procedures defined in NebFact 02-507 "Manure Testing: What to Request?" and Nebguide G02-1450 "A Sampling Manures for Nutrient Analysis" will be followed.
Analysis to be Completed	☒ Total nitrogen (required) ☒ Ammonium nitrogen (required) ☒ Organic nitrogen (recommended) ☒ Phosphorus (recommended) ☒ Potassium ☒ Trace minerals ☒ Moisture or solids content (recommended) ☒ pH ☒ Electrical conductivity (recommended*) ☐ Other: _____	☒ Total nitrogen (required) ☒ Ammonium nitrogen (required) ☒ Organic nitrogen (recommended) ☒ Phosphorus (recommended) ☒ Potassium ☒ Trace minerals ☒ Moisture or solids content (recommended) ☒ pH ☒ Electrical conductivity (recommended*) ☐ Other: _____
Other: (e.g. laboratory used)		

Timing of Selected Activities. Check appropriate months when sampling should occur.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Manure sampling												
Solids at pen cleanout											X	
Solids from stockpiles							X					
From holding pond water			X									