AGENCY USE ONLY				
PERMIT NO.: MTG010277	Date Rec'd.: 8/13/15	Amount Rec'd.: 0	Check No.:	Rec'd By:

Montana Department of
ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

FORM
NOI

Notice of Intent (NOI) for Montana Pollution Discharge Elimination System Application for New and Existing Concentrated Animal Feeding Operations

The Application form is to be completed by the owner or operator of a Concentrated Animal Feeding Operation (CAFO) or Aquatic Animal Production Facility. Please read the attached instructions before completing this form. You must print or type legibly; forms that are not legible or are not complete will be returned. You must maintain a copy of the completed application form for your records.

Section A - Application Status *(Check one)*:

- [x] New — No prior application submitted for this site.
- [x] Resubmitted — Permit Number: MTG _____
- [ ] Renewal — Permit Number: MTG _____
- [ ] Modification — Permit Number: MTG _____

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PERMITTING & COMPLIANCE

Section B - Facility or Site Information *(See instruction sheet.)*:

Site Name: Niedge Livestock

Site Location: 3.5 miles Northeast of Miles City, Montana

Nearest City or Town: Miles City, Montana County: Custer

Latitude: 46.27.18 Longitude: -105 46.17

Date Facility began operation? 1992

Is this facility or site located on Indian Lands? [ ] Yes [✓] No

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name: Mike Niedge dba Niedge Livestock

Mailing Address: 132 Bitterroot Road

City, State, and Zip Code: Miles City, Montana 59301

Phone Number: 406-234-5584

Is the person listed above the owner? [✓] Yes [ ] No

Status of Applicant *(Check one)* [ ] Federal [ ] State [✓] Private [ ] Public [ ] Other (specify) _____

COPY

Section D - Existing or Pending Permits, Certifications, or Approvals: ☐ None

☐ MPDES _____ ☐ RCRA _____

☐ PSD (Air Emissions) _____ ☐ Other _____

☐ 404 Permit (dredge & fill) _____ ☐ Other _____

Section E – Standard Industrial Classification (SIC) Codes:

Provide at least one SIC code which best reflects the activity of project described in Section H.			
Code	**A. Primary**	**Code**	**B. Second**
1	211 Beef Cattle Feedlot	2	
Code	**C. Third**	**Code**	**D. Fourth**
3		3	

Section F - Facility or Site Contact Person/Position:

Name and Title, or Position Title Mike Niedge, president Niedge Livestock

Mailing Address 132 Bitterroot Road

City, State, and Zip Code Miles City, Montana 59301

Phone Number 406-234-5584

Section G – Receiving Surface Waters(s):

Outfall/Discharge Locations: For each outfall, List latitude and longitude to the nearest second and the name of the receiving waters			
Outfall Number	**Latitude**	**Longitude**	**Receiving Surface Waters**
001	46.27.52	-105 45.84	Bensley Creek
002			
003			
004			
005			

Map: Attach a topographic map extending one mile beyond the property boundaries or the site activity identified in Section B depicting the facility or activity boundaries, major drainage patterns, and the receiving surface waters, stated above. Also identify the specific location of the production area, and land application area(s).

Is the receiving water on the 303(d) list for nutrients (nitrogen and/or phosphorus) ☐ Yes ☑ No

Section H – Concentration Animal Feeding Operation Characteristics

Waste Production, Storage and Disposal

	Animal type	Number in Open Confinement	Number Housed Under Roof
☐	Mature Dairy Cows		
☐	Dairy Heifers		
☐	Veal Calves		
☑	Cattle (not dairy or veal)	2000	0
☐	Swine (55 lbs or over)		
☐	Swine (55 lbs or under)		
☐	Horses		
☐	Sheep or Lambs		
☐	Turkeys		
☐	Chickens (broilers)		
☐	Chickens (layers)		
☐	Ducks		
☐	Other (Specify:_____)		
☐	Other (Specify:_____)		
☐	Other (Specify:_____)		

Manure, Litter and/or Wastewater Production and Use.

How much manure, litter, and process wastewater is generated annually by the facility?

Solid (tons): 1622 tons Liquid/Slurry (gallons): -0-

If land applied, how many acres of land under control of the permit applicant are available to apply the manure, litter, or process wastewater generated from the facility? (Note: Do not include setback distances in available acreage

467.1 acres Acres

How much manure, litter, and process wastewater is transferred to other persons per year? (estimated) Solid (tons): -0- Liquid/Slurry (gallons): -0-

Were the containment structures built after February 2006? NO

Y ☐ Do the waste containment structures have 10 feet of separation between the pond bottom and any bedrock formations?

Y ☐ Do the waste containment structures have 4 feet of separation from the pond bottom and any ground water?

N ☐ Were any of the waste containment structures built within 500 feet of any existing well?

Type of Containment/Storage	Total Capacity	Units (gallons or tons)	Days of Storage
☐ Anaerobic Lagoon			
☐ Storage Pond #1			
☐ Storage Pond #2			
☐ Storage Pond #3			
☐ Storage Pond #4			
☐ Storage Pond #5			
☐ Above Ground Storage Tank			
☐ Below Ground Storage Tank #1			
☐ Below Ground Storage Tank #2			
☐ Underfloor Pits			
☐ Roofed Storage Shed			
☐ Concrete Pad			
☐ Impervious Soil Pad			
☑ Other (Specify: Dry Stack Feedlot)	2000	tons	200
☑ Other (Specify: Evaporation Ponds)	644,133	gallons	1

Physical Data for CAFO

Nutrient Management Plan

All Concentrated Animal Feeding Operations seeking permit coverage after July 31, 2007 are required to complete and implement a Nutrient Management (NMP). The NMP must be submitted to the Department using the form provided by the Department (Form NMP). Check the box below that applies and provide the required information. The NMP must be developed in accordance with ARM 17.30.1334 and implemented upon the effective date of permit coverage. (Check One)

☑ Does the facility have an NMP?

Date NMP was developed: April 30, 2015

Date NMP was last modified: _____

☐ NMP has not been prepared; provide detailed explanation below

Section I – Supplemental Information

Section J - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print) Mike Niedge	
B. Title (Type or Print) President, Niedge Livestock LLC	**C. Phone No.** 406-234-5584
D. Signature Mike Niedge	**E. Date Signed** 8/11/15

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form (NOI) and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

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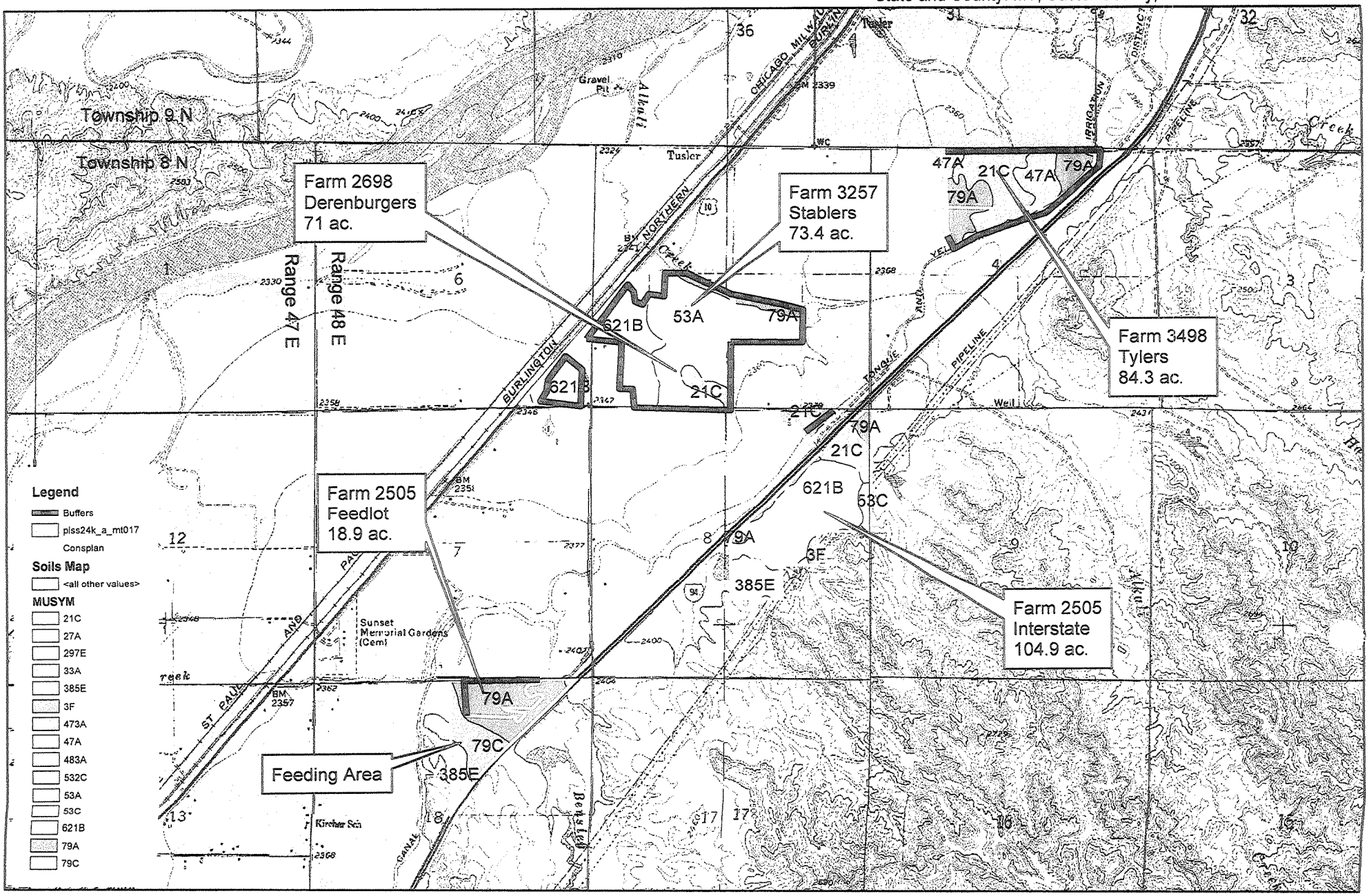
AUG 18 2015
DEQ/WPB
PERMITTING & COMPLIANCE DIV.

Customer(s): NIEDGE LIVESTOCK LLC

Land Application Fields

Assisted By: RUSTY IRION

State and County: MT, Custer County, Montana



AGENCY USE ONLY				
PERMIT NO.:	Date Rec'd.:	Amount Rec'd.:	Check No.:	Rec'd By:

Montana Department of ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

FORM	
NMP	Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For filling out Form NMP," found at the back of this form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your NOI-CAFO. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. The 2013 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A – NMP Status:

- [x] New — No prior NMP submitted for this site.
- [x] Resubmitted — Previous NMP found incomplete.
- [ ] Modification — Change or update to existing NMP.
- [ ] New 2013 — New 2013 version of NMP.

Section B – Facility Information:

Facility Name Niedge Livestock

Facility Location 3.5 miles Northeast of Miles City, Montana

Nearest City of Town Miles City, Montana County Custer

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Section C – Applicant (Owner/Operator Information):

Owner or Operator Name Mike Niedge dba Niedge Livestock LLc

Mailing Address 132 Bitterroot Road

City, State, and Zip code Miles City, Montana 59301

Facility Phone Number 406-234-5584

Email

COPY

Section D – NMP Minimum Elements:

1. Livestock Statistics		
Animal Type and number of animals	**# of Days on Site (per year)**	**Annual Manure Production (tons, cu. yds. or gal**
1. Beef calves, 2000 head	150	1622 tons
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Method used for estimating annual manure production:
Manure Management Planner version 0.33
developed by Purdue University

2. Manure Handling

a. Describe Manure handling at the facility:
Pens are scraped annually in late September or early October. Manure is hauled out to fields and spread at that time

b. Frequency of Manure Removal from confinement areas:
Annually

c. Is this manure temporarily stored in any location other than the confinement area? ☐ Yes ☑ No
If so then how and where?

d. Is manure stored on impervious surface? ☐ Yes ☐ No
If yes, describe type and characteristics of this surface:
N/A

3. Waste Control Structures					
Waste Control Structures (name/type)	Length (ft.)	Width (ft.)	Depth (ft.)	Volume (cubic ft. or gallons)	Number of days of storage
1. EvaporationPond	119	85	4	30,350cu.ft.	1
2. EvaporationPond	128	48	4	18,432cu.ft.	1
3. EvaporationPond	88	60	4	16,896cu.ft.	1
4. EvaporationPond	131	52	4	20,436cu.ft.	1
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

What is the 24 hr. 25 yr. storm event at this facility 2.7 inches

Production area: 5.6 **acres. Type of lot (dirt or paved):** dirt

Area contributing drainage form outside CAFO that enters confinement areas and waste storage, conveyance, or treatment structures: 5.2 **acres.**

What is the annual precipitation during the critical storage period 5.5 inches

How much freeboard do the pond(s) have 12 - 18 inches

4. Disposal of Dead Animals.

Describe how dead animals are disposed of at this facility:
Animals are buried in an area adjacent to the feeding area.

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:
feeding area sits along the crest of a hill with very little runoff water accessing the facility. Dikes are used to divert clean water around feeding area and evaporation ponds.

6. Prohibiting Animals and Wastes from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:
There are no State Waters on or adjacent to the property. Topography keeps all runoff on site.

Describe how Chemicals and other contaminants are handled on-site:
No Chemicals or other Contaminants are stored on the facility

7. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural BMPS which will be used to control runoff of pollutants from facility's production area. Indicate the location of these measures. If BMPS are not installed include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces,, and waterways above and open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area: decreasing open lot surface area; repairing of adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.
Production Area BMP's
Clean water diversions. Dirty water diversions. Manure pack left in lot during summer months to absorb runoff

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's land production area. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites;

never spray irrigating waste on to frozen ground: consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Land Application BMP's
Buffers around field edges adjacent to water and urban structures

Buffers	☑ Yes ☐ No	**Conservation Tillage**	☑ Yes ☐ No
Constructed Wetlands	☐ Yes ☐ No	**Grass Filter**	☐ Yes ☐ No
Infiltration Field	☐ Yes ☐ No	**Residue Management**	☑ Yes ☐ No
Set backs	☑ Yes ☐ No	**Terrace**	☐ Yes ☐ No

Other examples

8. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part 2 of the permit.

Has a guidance document been developed for the facility? ☑ Yes ☐ No

Certify the document address the following requirements:

Implementation of the NMP:	☑ Yes ☐ No
Facility operation and maintenance:	☑ Yes ☐ No
Record keeping and reporting	☑ Yes ☐ No
Sample collection and analysis:	☑ Yes ☐ No
Manure transfer	☑ Yes ☐ No

Provide name, date and location of most recent documentation:
Feedlot manager will utilize the Guidance Documents available within Manure Management Planner software

If your answer to any of the above question is no, provide explanation:

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

☑ Yes If yes, then the information requested in Section E must be provided.

☐ No If no, then provide an explanation of how animal waste at this facility are managed.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"X 17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any downgradient surface waters.
- The location of any downgradient open tile line intake structures
- The location of any downgradient sinkholes
- The location of any downgradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibration procedures:

Solid Waste Manure Spreader. Gross and Tare weights established and coverage area computed

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to ARM 17.30.1334

Other (describe)

Soil Sampling and Analysis Procedures

Representative soil (composite) samples from the top 6 inches layer of soil for each field where manure will be applied must be analyzed for phosphorus content at least once every three years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater

Soil samples collection will occur according the methods in ARM 17.30.1334

Other (describe)

Phosphorus Risk Assessment

The permittee shall access the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or

may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

Method A – Representative Soil Sample
Method B – Phosphorus Index

Method A – Representative Soil Sample

a. Obtain one or more representative soil sample(s) from the field per 17.30.1334
b. Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm)
c. Using the results of the Olsen P test, determine application basis according to the Table below.

Soil Test

Olsen P Soil Test Results (ppm)	Application Basis
<25.0	Nitrogen Needs of Crop
25.1 - 100.0	Phosphorus Needs of Crop
100.0 – 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application allowed

Method B – Phosphorus Index

a. Complete a phosphorus Index according to the crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections in Appendix A, please refer to the method as described in Natural Resource Conservation Service (NRCS), Agronomy Technical Note MT-77 (rev3), January 2006.
b. Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus

Total Phosphorus Index Value	Site Vulnerability to Phosphorus Loss
<11	Low
11-21	Medium
22-43	High
>43	Very High

c. Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	Application Basis
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

The applicant has 2 ways in which to report how manure or process wastewater application rates can be reported to DEQ.

1. **Linear Approach.** Expresses rates of application as pounds of nitrogen and phosphorus. CAFOs selecting the linear approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. [If a state does not have an N transport risk assessment, the NMP must document any basis for assuming that nitrogen will be fully used by crops.] The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted or any other uses of a field such as pasture or fallow fields.
- The realistic annual yield goal for each crop or use identified for each field.
- The nitrogen and phosphorus recommendations from in ARM 17.30.1334 (technical standard) for each crop or use identified for each field.
- Credits for all residual nitrogen in each field that will be plant-available.
- Consideration of multi-year phosphorus application. For any field where nutrients are applied at a rate based on the crop phosphorus requirement, the NMP must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement.
- All other additions of plant available nitrogen and phosphorus (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen).
- The form and source of manure, litter, and process wastewater to be land-applied.
- The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated.
- The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied.
- Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.

2. **Narrative Rate Approach.** Expresses a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied. CAFOs selecting the narrative rate approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:
- The maximum amounts of nitrogen and phosphorus that will be derived from all sources of nutrients (pounds/acre for each crop and field).
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted in each field or any other uses of a field such as pasture or fallow fields, including alternative crops if applicable. Any alternative crops included in the NMP must be listed by field, in addition to the crops identified in the planned crop rotation for that field.
- The realistic annual yield goal for each crop or use identified for each field for each year, including any alternative crops identified.
- The nitrogen and phosphorus recommendations from ***[the permitting authority to specify acceptable sources]*** for each crop or use identified for each field, including any alternative crops identified.
- The methodology (including formulas, sources of data, protocols for making determination, etc.) and actual data that will be used to account for: (1) the results of soil tests required by Parts II.A.4.b and III.A.3.g of this

permit, (2) credits for all nitrogen in the field that will be plant- available, (3) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (4) consideration of multi-year phosphorus application (for any field where nutrients are applied at a rate based on the crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement), (5) all other additions of plant available nitrogen and phosphorus to the field (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen), (6) timing and method of land application, and (7) volatilization of nitrogen and mineralization of organic nitrogen.

- Any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied in accordance with the Narrative Rate Approach.
- NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the permitting authority in establishing site-specific permit terms:

i. Planned crop rotations for each field for the period of permit coverage.
ii. Projected amount of manure, litter, or process wastewater to be applied.
iii. Projected credits for all nitrogen in the field that will be plant-available.
iv. Consideration of multi-year phosphorus application.
v. Accounting for other additions of plant-available nitrogen and phosphorus to the field.
vi. The predicted form, source, and method of application of manure, litter, and process wastewater for each crop

- If the receiving water is on the 303(d) list for nutrients then the narrative rate approach must be used.

a. For the Linear Approach the permittee will complete the Nutrient Budget Worksheet, below, for the next 5 years to which manure or process waste water is or may be applied. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet					
Field Identification: Herman's		Year: 2015		Crop: Corn, Silage	
Expected Crop Yield: 29 ton					
Phosphorus Index results or phosphorus application from soil test:					
Method of application: Dry Spreader					
When will application occur: September and October 2015					
Nutrient Budget			**Nitrogen-based Application**	**Phosphorus-based Application**	**Source of Information**
1		Crop Nutrient Needs, lbs/acre	261	104	Montana Extension EB-161
2	(-)	Credits from previous legume crops, lbs/acre	0	0	
3	(-)	Residuals from past manure production, lbs/acre	0	0	
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	256	104	
5	(-)	Nutrients supplied in irrigation water, lbs/acre	5	0	
6	(=)	**Additional Nutrients Needed, lbs/acre**	0	0	
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	8	15	Agvise Lab Manure Test Report
8	(x)	Nutrient Avalability factor, for Phosphorus based application use 1.0)	1	1	
9	(=)	**Available Nutrients in Manure, lbs/ton or lbs/1,000 gal**	8	15	
10		Additional Nutrients needed, lbs/acre (calculated above)	216	108	2016 crop needs for N 2016, 2017, 2018 crop needs for P
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	8	15	
12	(=)	**Manure Application Rate, tons/acre or 1,000 gal/acre**	20	20	

Comments: Because manure was not applied until after crop harvest, and no manure had been applied to this field previously, all calculations were based on using comercial fertilizer for this crop. Please see 2016 nutrient budget for this filed that reflects application of manure to this field

Nutrient Budget Worksheet					
Field Identification: Herman's		Year: 2016		Crop: Corn, Grain	
Expected Crop Yield: 180 bushel					
Phosphorus Index results or phosphorus application from soil test:					
Method of application: Commercial Fertilizer banded and spread					
When will application occur: 1 week prior to planting corn					
Nutrient Budget			**Nitrogen-based Application**	**Phosphorus-based Application**	**Source of Information**
1		Crop Nutrient Needs, lbs/acre	216	108	Montana Extension EB-161
2	(-)	Credits from previous legume crops, lbs/acre	0	0	
3	(-)	Residuals from past manure production, lbs/acre	160	300	Mt NRCS 590- Spec 3 yr application rate P
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	51	20	Starter
5	(-)	Nutrients supplied in irrigation water, lbs/acre	5	0	
6	(=)	**Additional Nutrients Needed, lbs/acre**	0	0	
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)			
8	(x)	Nutrient Avalability factor, for Phosphorus based application use 1.0)			
9	(=)	**Available Nutrients in Manure, lbs/ton or lbs/1,000 gal**	0	0	
10		Additional Nutrients needed, lbs/acre (calculated above)	0	0	
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	0	0	
12	(=)	**Manure Application Rate, tons/acre or 1,000 gal/acre**	0	0	

Comments: Manure applied after corn silage harvest in 2015. Phosphorous was applied for three years crop

Section F - CERTIFICATION

Permittee Information: This form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print) Mike Niedge	
B. Title (Type or Print) President, Niedge Livestock LLC	**C. Phone No.** 406-234-5584
D. Signature Mike Niedge	**E. Date Signed** 8/11/15

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form and the applicable fee to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

RECEIVED
AUG 18 2015
DEQ/WB
PERMITTING & COMPLIANCE DIV.

Projected Soil P And K Levels

Plan File: C:\Home\Rusty.Irion\Bice Feedlot\Niedge.mmp ***Last Saved:*** 4/30/2015
Operation: Niedge Farms Feedlot ***State:*** Montana ***Init. File Rev:*** 12/10/2013

Field ID	*Sub ID*	*P Level At Start Of Plan*	*P Level At End Of Plan*	*K Level At Start Of Plan*	*K Level At End Of Plan*	*Units*
Interstate	Crop	47	26	276	109	ppm
Interstate	Past	5	9	150	164	ppm
Feedlot		120	99	574	407	ppm
Derenburger		117	96	514	347	ppm
Tyler's		6	7	246	245	ppm
Herman's		20	22	197	238	ppm
Stabler's		25	26	256	253	ppm

Notes
Equations used to determine change in soil test P and K:
Change in P (ppm) = Round(NetP2O5/23)
Change in K (ppm) = Round(NetK2O/8)

Projected Soil P And K Levels

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Operation: Niedge Farms Feedlot ***State:*** Montana ***Init. File Rev:*** 12/10/2013

Field ID	*Sub ID*	*P Level At Start Of Plan*	*P Level At End Of Plan*	*K Level At Start Of Plan*	*K Level At End Of Plan*	*Units*
Interstate	Crop	47	26	276	109	ppm
Interstate	Past	5	9	150	164	ppm
Feedlot		120	99	574	407	ppm
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Notes
Equations used to determine change in soil test P and K:
Change in P (ppm) = Round(NetP2O5/23)
Change in K (ppm) = Round(NetK2O/8)

Field Nutrient Balance

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Operation: Niedge Farms Feedlot
State: Montana
Last Saved: 4/30/2015
Init. File Rev: 12/10/2013

Year	Field ID	Sub ID	Size	Crop	Yield Goal	Fertilizer Recs[2]			Nutrients Applied[3]			Balance After Recs[4]			After Removal[5]	
						N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	P_2O_5	K_2O
			Acres[1]		/Acre	Lb/A	Lb/A	Lb/A	Lb/A	Lb/A	Lb/A	Lb/A	Lb/A	Lb/A	Lb/A	Lb/A
2015	Interstate	Crop	33.7	Corn, silage	29	24¤	25¤	35¤	24	20	0	0	-5	-35	-96	-267
2016	Interstate	Crop	33.7	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2017	Interstate	Crop	33.7	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2018	Interstate	Crop	33.7	Corn, silage	29	261¤	25¤	35¤	260	20	0	-1	-5	-35	-96	-267
2019	Interstate	Crop	33.7	Corn, silage	29	261¤	25¤	35¤	260	20	0	-1	-5	-35	-96	-267
Total	**Interstate**	**Crop**	**33.7**			**1,068**	**125**	**175**	**1,066**	**100**	**0**					
2015	Interstate	Past	71.2	Grass	1	25¤	30¤	45¤	0	0	0	-25	-30	-45	-10	-38
2016	Interstate	Past	71.2	Grass	1	25¤	30¤	45¤	0	0	0	-25	-30	-45	-10	-38
2017	Interstate	Past	71.2	Grass	1	25¤	30¤	45¤	0	0	0	-25	-30	-45	-10	-38
2018	Interstate	Past	71.2	Grass	1	25¤	30¤	45¤	27	114	274	2	84	229	104	236
2019	Interstate	Past	71.2	Grass	1	25¤	30¤	45¤	0	0	0	-18†	54	184	94	198
Total	**Interstate**	**Past**	**71.2**			**125**	**150**	**225**	**27**	**114**	**274**					
2015	Feedlot		18.9	Corn, silage	29	0¤	25¤	35¤	0	20	0	0	-5	-35	-96	-267
2016	Feedlot		18.9	Corn, silage	29	0¤	25¤	35¤	0	20	0	0	-5	-35	-96	-267
2017	Feedlot		18.9	Corn, silage	29	120¤	25¤	35¤	120	20	0	0	-5	-35	-96	-267
2018	Feedlot		18.9	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2019	Feedlot		18.9	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
Total	**Feedlot**		**18.9**			**642**	**125**	**175**	**642**	**100**	**0**					
2015	Feedlot		0.7	Corn, silage	29	0¤	25¤	35¤	0	20	0	0	-5	-35	-96	-267
2016	Feedlot		0.7	Corn, silage	29	0¤	25¤	35¤	0	20	0	0	-5	-35	-96	-267
2017	Feedlot		0.7	Corn, silage	29	120¤	25¤	35¤	120	20	0	0	-5	-35	-96	-267
2018	Feedlot		0.7	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2019	Feedlot		0.7	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
Total	**Feedlot**		**0.7**			**642**	**125**	**175**	**642**	**100**	**0**					
2015	Derenburger		71	Corn, silage	29	133¤	25¤	35¤	133	20	0	0	-5	-35	-96	-267
2016	Derenburger		71	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2017	Derenburger		71	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2018	Derenburger		71	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2019	Derenburger		71	Corn, silage	29	261¤	25¤	35¤	260	20	0	-1	-5	-35	-96	-267
Total	**Derenburger**		**71**			**1,177**	**125**	**175**	**1,176**	**100**	**0**					
2015	Derenburger		2.5	Corn, silage	29	133¤	25¤	35¤	133	20	0	0	-5	-35	-96	-267
2016	Derenburger		2.5	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2017	Derenburger		2.5	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2018	Derenburger		2.5	Corn, silage	29	261¤	25¤	35¤	261	20	0	0	-5	-35	-96	-267
2019	Derenburger		2.5	Corn, silage	29	261¤	25¤	35¤	260	20	0	-1	-5	-35	-96	-267
Total	**Derenburger**		**2.5**			**1,177**	**125**	**175**	**1,176**	**100**	**0**					

2015	Tyler's	84.3	Corn, silage	29	0¤	25¤	35¤	0	100	250	0	75	215	-16	-17
2016	Tyler's	84.3	Corn, silage	29	229¤	25¤	35¤	229	100	200	0	150	380	-16	-67
2017	Tyler's	84.3	Corn, silage	29	261¤	25¤	35¤	261	228	546	0	353	891	112	279
2018	Tyler's	84.3	Corn, silage	29	261¤	25¤	35¤	250	0	0	2†	328	856	-4	12
2019	Tyler's	84.3	Corn, silage	29	261¤	25¤	35¤	255	93	254	0†	396	1,075	-23	-1
Total	**Tyler's**	**84.3**			**1,012**	**125**	**175**	**995**	**521**	**1,250**					
2015	Tyler's	0.91	Corn, silage	29	0¤	25¤	35¤	0	100	250	0	75	215	-16	-17
2016	Tyler's	0.91	Corn, silage	29	229¤	25¤	35¤	229	100	200	0	150	380	-16	-67
2017	Tyler's	0.91	Corn, silage	29	261¤	25¤	35¤	196	0	0	-65	125	345	-116	-267
2018	Tyler's	0.91	Corn, silage	29	261¤	25¤	35¤	250	0	0	-11	100	310	-116	-267
2019	Tyler's	0.91	Corn, silage	29	261¤	25¤	35¤	236	25	90	-25	100	365	-91	-177
Total	**Tyler's**	**0.91**			**1,012**	**125**	**175**	**911**	**225**	**540**					
2015	Herman's	114.6	Corn, silage	29	162¤	25¤	60¤	162	116	267	0	91	207	0	0
2016	Herman's	114.6	Corn, grain	180	216¤	25¤	50¤	216	108	186	0	174	343	0	137
2017	Herman's	114.6	Corn, grain	180	216¤	25¤	50¤	205	100	0	-6†	249	293	-8	88
2018	Herman's	114.6	Corn, grain	180	216¤	25¤	50¤	215	108	0	1†	332	243	0	39
2019	Herman's	114.6	Corn, grain	180	216¤	25¤	50¤	216	119	286	0	426	479	11	276
Total	**Herman's**	**114.6**			**1,026**	**125**	**260**	**1,014**	**551**	**739**					
2015	Herman's	0.8	Corn, silage	29	162¤	25¤	60¤	162	116	267	0	91	207	0	0
2016	Herman's	0.8	Corn, grain	180	216¤	25¤	50¤	194	31	0	-22	97	157	-77	-49
2017	Herman's	0.8	Corn, grain	180	216¤	25¤	50¤	205	100	0	-11	172	107	-8	-49
2018	Herman's	0.8	Corn, grain	180	216¤	25¤	50¤	215	108	0	-1	255	57	0	-49
2019	Herman's	0.8	Corn, grain	180	216¤	25¤	50¤	182	0	0	-34	230	7	-108	-49
Total	**Herman's**	**0.8**			**1,026**	**125**	**260**	**958**	**355**	**267**					
2015	Stabler's	73.4	Corn, silage	29	0¤	25¤	35¤	0	116	267	0	91	232	0	0
2016	Stabler's	73.4	Corn, silage	29	133¤	25¤	35¤	133	116	267	0	182	464	0	0
2017	Stabler's	73.4	Corn, silage	29	261¤	25¤	35¤	261	100	200	0	257	629	-16	-67
2018	Stabler's	73.4	Corn, silage	29	261¤	25¤	35¤	261	180	431	0	412	1,025	64	164
2019	Stabler's	73.4	Corn, silage	29	261¤	25¤	35¤	250	50	100	-1†	437	1,090	-2	-3
Total	**Stabler's**	**73.4**			**916**	**125**	**175**	**905**	**562**	**1,265**					
2015	Stabler's	0.9	Corn, silage	29	0¤	25¤	35¤	0	116	267	0	91	232	0	0
2016	Stabler's	0.9	Corn, silage	29	133¤	25¤	35¤	133	116	267	0	182	464	0	0
2017	Stabler's	0.9	Corn, silage	29	261¤	25¤	35¤	261	100	200	0	257	629	-16	-67
2018	Stabler's	0.9	Corn, silage	29	261¤	25¤	35¤	210	0	0	-51	232	594	-116	-267
2019	Stabler's	0.9	Corn, silage	29	261¤	25¤	35¤	250	50	100	-11	257	659	-66	-167
Total	**Stabler's**	**0.9**			**916**	**125**	**175**	**854**	**382**	**834**					

Notes

[1] If a field has a non-spreadable area, it is listed separately following the field's spreadable area.

[2] Fertilizer Recs are the crop fertilizer recommendations. The N rec accounts for any N credit from previous legume crop.

[3] Nutrients Applied are the nutrients expected to be available to the crop from that year's manure applications plus nutrients from that year's commercial fertilizer applications. With a double crop year, the total nutrients applied for both crops and the year's balances are listed on the second crop's line.

[4] Nutrients Applied minus Fertilizer Recs through indicated crop year. With N, includes amount of residual N expected to become available that year from prior years' manure applications. Negative values indicate a potential need to apply additional nutrients.

[5] Nutrients Applied minus amount removed by harvested portion of crop through indicated crop year.

¤ Indicates a custom fertilizer recommendation in the Fertilizer Recs columns.
[a] Indicates in the Balance After Recs N column that the legume crop is assumed to utilize some or all of the supplied N.
† Indicates in the Balance After Recs N column that the value includes residual N expected to become available that year from prior years' manure applications.

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

GENERAL

Operation	Niedge Farms Feedlot				
Address	132 Bitterroot Road				
Town	Miles City	**State**	MT	**Zip Code**	59301
Contact	Mike Niedge				
Office Phone	406-234-5584	**Home Phone**			
E-Mail Address					
Notes					
County	Custer				
Starting Year	2015	**Starting Month**	April	**Years In Plan**	5
Setbacks	Large CAFO; NRCS Standard				

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FIELDS

Field ID	Subfield ID	Total Size (Acres)	Spread-able Size (Acres)	Storage Distance (Miles)	County (If Different From Operation's County)	Predominant Soil Type (Name, Texture, Survey Area ID, Map Symbol, Slope Range)	Slope % (If Not Ave.)	Irri-gated With Water	Is Not Owned	Farm ID	FSA Farm	FSA Tract	FSA Field	Notes
Interstate	Crop	33.7	33.7	5		Marvan SIC (017 621B 0-4%)		X			2505			
Interstate	Past	71.2	71.2	5		Marvan SIC (017 621B 0-4%)					2505			
Feedlot		19.6	18.9	0		Yamacall L (017 79A 0-2%)		X			2505			
Derenburger		73.5	71	1		Kobase SICL (017 53A 0-2%)		X	X		2698			
Tyler's		85.21	84.3	3		Yamacall L (017 79A 0-2%)		X			3498			
Herman's		115.4	114.6	12		Chanta L (017 33A 0-2%)		X	X		555			
Stabler's		74.3	73.4	1		Kobase SICL (017 53A 0-2%)		X	X		3257			

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ASSESSMENT, All States

Field ID	Subfield ID	Distance To Water (Feet)	Type Of Water	Slope Length (Feet)	Runoff Reduction Practice	Buffer Width (Feet)	Type Of Artificial Drainage	Manure Applied Annually	Will Not Receive Manure	Water Erosion (T/A/Yr)	Wind Erosion (T/A/Yr)	Irrigation Erosion (T/A/Yr)	Gully Erosion (T/A/Yr)	Ephem. Erosion (T/A/Yr)	P Index Or Risk Index	Notes
Interstate	Crop	9,000	Perennial stream	800	☐			☐	☐	0	3	2	0	0		
Interstate	Past	9,000	Perennial stream	1,000	☐			☐	☐	0	0	0	0	0		
Feedlot		800	Irrigation delivery ditch	800	☐			☐	☐	0	3	2	0	0		
Derenburger		1,000	Perennial stream	800	☐			☐	☐	0	3	2	0	0		
Tyler's		2,000	Perennial stream	800	X			☐	☐	0	1	0	0	0		
Herman's		1,500	Perennial stream	800	☐			☐	☐	0	3	2	0	0		
Stabler's		1,000	Perennial stream	800	☐			☐	☐	0	3	2	0	0		

ASSESSMENT, State-Specific

Field ID	Subfield ID	Sprinkler Irrigation Spray Type	Furrow Irr. Rate (gal/min/ furrow)	Furrow Irr. Tailwater Recovery	Grassed Waterways in Conc. Flow
Interstate	Crop				
Interstate	Past				
Feedlot					
Derenburger					
Tyler's					
Herman's		Low spray			
Stabler's					

Manure Management Plan Data

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SOIL TESTS

Field ID	Subfield ID	Test Year	OM (%)	P	P Test Used	K	Mg	Ca	Na	Al	Levels Are In Lb/A	Soil pH	Buffer pH	Esti-mated CEC	CEC	NO_3-N (ppm)	EC (mmhos /cm)	SO_4-S (ppm)	Notes
Interstate	Crop	2015	4.3	47	Olsen	276					☐	7.9				118	0.61		
Interstate	Past			5		150					☐					10			
Feedlot		2015	4	120	Olsen	574					☐	7.5				200	0.82		
Derenburger		2015		117	Olsen	514					☐	7.7				64	1		
Tyler's		2015	4.2	6	Olsen	246					☐	8.2				146	0.79		
Herman's		2015	1.5	20	Olsen	197					☐	8.1				50	0.43		
Stabler's		2015	3.9	25	Olsen	256					☐	8.2				195	0.94		

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CROPS

Field ID	Subfield ID	Crop Year	Planned Crop	Yield Goal (/Acre)	Yield Units	Legume % Stand	Default N Rec (Lb/A)	Default P_2O_5 Rec (Lb/A)	Default K_2O Rec (Lb/A)	Custom N Rec (Lb/A)	Custom P_2O_5 Rec (Lb/A)	Custom K_2O Rec (Lb/A)	Source Of Custom Fertilizer Recommendations
Interstate	Crop	2015	Corn, silage	29	Ton		0	25	35	24	25	35	Fertilizer Guidelines for Montana EB161
Interstate	Crop	2016	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Interstate	Crop	2017	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Interstate	Crop	2018	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Interstate	Crop	2019	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Interstate	Past	2015	Grass	1	Ton	0	0	35	45	25	30	45	Fertilizer Guidelines for Montana EB161
Interstate	Past	2016	Grass	1	Ton	0	0	35	45	25	30	45	Fertilizer Guidelines for Montana EB161
Interstate	Past	2017	Grass	1	Ton	0	0	35	45	25	30	45	Fertilizer Guidelines for Montana EB161
Interstate	Past	2018	Grass	1	Ton	0	0	35	45	25	30	45	Fertilizer Guidelines for Montana EB161
Interstate	Past	2019	Grass	1	Ton	0	0	35	45	25	30	45	Fertilizer Guidelines for Montana EB161
Feedlot		2015	Corn, silage	29	Ton		0	25	35	0	25	35	Fertilizer Guidelines for Montana EB161
Feedlot		2016	Corn, silage	29	Ton		0	25	35	0	25	35	Fertilizer Guidelines for Montana EB161
Feedlot		2017	Corn, silage	29	Ton		0	25	35	120	25	35	Fertilizer Guidelines for Montana EB161
Feedlot		2018	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Feedlot		2019	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161

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Field ID	Subfield ID	Crop Year	Planned Crop	Yield Goal (/Acre)	Yield Units	Legume % Stand	Default N Rec (Lb/A)	Default P_2O_5 Rec (Lb/A)	Default K_2O Rec (Lb/A)	Custom N Rec (Lb/A)	Custom P_2O_5 Rec (Lb/A)	Custom K_2O Rec (Lb/A)	Source Of Custom Fertilizer Recommendations
Derenburger		2015	Corn, silage	29	Ton		0	25	35	133	25	35	Fertilizer Guidelines for Montana EB161
Derenburger		2016	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Derenburger		2017	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Derenburger		2018	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Derenburger		2019	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Tyler's		2015	Corn, silage	29	Ton		0	60	35	0	25	35	Fertilizer Guidelines for Montana EB161
Tyler's		2016	Corn, silage	29	Ton		0	60	35	229	25	35	Fertilizer Guidelines for Montana EB161
Tyler's		2017	Corn, silage	29	Ton		0	60	35	261	25	35	Fertilizer Guidelines for Montana EB161
Tyler's		2018	Corn, silage	29	Ton		0	60	35	261	25	35	Fertilizer Guidelines for Montana EB161
Tyler's		2019	Corn, silage	29	Ton		0	60	35	261	25	35	Fertilizer Guidelines for Montana EB161
Herman's		2015	Corn, silage	29	Ton		0	25	60	162	25	60	Fertilizer Guidelines for Montana EB161
Herman's		2016	Corn, grain	180	Bu		0	20	50	216	25	50	Fertilizer Guidelines for Montana EB161
Herman's		2017	Corn, grain	180	Bu		0	20	50	216	25	50	Fertilizer Guidelines for Montana EB161
Herman's		2018	Corn, grain	180	Bu		0	20	50	216	25	50	Fertilizer Guidelines for Montana EB161
Herman's		2019	Corn, grain	180	Bu		0	20	50	216	25	50	Fertilizer Guidelines for Montana EB161

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Stabler's		2015	Corn, silage	29	Ton		0	25	35	0	25	35	Fertilizer Guidelines for Montana EB161
Stabler's		2016	Corn, silage	29	Ton		0	25	35	133	25	35	Fertilizer Guidelines for Montana EB161
Stabler's		2017	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Stabler's		2018	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161
Stabler's		2019	Corn, silage	29	Ton		0	25	35	261	25	35	Fertilizer Guidelines for Montana EB161

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

RUSLE2

Field ID	Subfield ID	Rock Cover (%)	Contouring	Strips/Barriers	Diversion/Terrace	Residue Burial	Managements
Interstate	Crop						
Interstate	Past						
Feedlot							
Derenburger							
Tyler's							
Herman's							
Stabler's							

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

STORAGE

Storage ID	Storage Type	Units	Pumpable Or Spreadable Capacity	Manure On Hand At Start Of Plan	Notes
Feedlot	Open feedlot/feedlot stack	Ton	2,000	500	

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

ANIMALS

Animal ID	Animal Type And Production Phase	Animal Weight (Lb)	Number Of Animals	Animals Present From	Animals Present Through	Manure Collected (%)	Extra Water (Gal/Animal/Day)	Bedding (Lb/Animal/Day)	Where Will Manure Be Stored?	Notes
beef calves	Weaned calf (beef)	700	2,000	Oct Late	Apr Late	90	1	0.1	Feedlot	

RATIONS

Animal Group ID	Ration
beef calves	Wet/Dry Feeding

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

ESTIMATED ANALYSIS

Storage ID	Estimated Total N	Est. NH_4-N	Est. Total P_2O_5	Est. Total K_2O	Est. Max. Avail. N	Est. Avail. P_2O_5	Est. Avail. K_2O	Analysis Units	Estimated Manure Production	Production Units
Feedlot	42.2	14.4	29.2	50.7	24.1	23.4	45.6	Lb/Ton	1,622	Ton/Year

MEASURED ANALYSIS

Storage ID	Measured Total N	Meas. NH_4-N	Meas. Total P_2O_5	Meas. Total K_2O	Meas. Max. Avail. N	Meas. Avail. P_2O_5	Meas. Avail. K_2O	Analysis Units	Meas. % Dry Matter	Measured Manure Production	Production Units	Source And Date Of Manure Analysis
Feedlot	14.0		15.0	32.0	8.0	12.0	28.8	Lb/Ton	62	1,622	Ton/Year	Agvise Laboratories 03/27/2015

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

EQUIPMENT

Equipment ID	Spreader Or Applicator Type	Spreader Or Pump Capacity	Capacity Units	Minimum Application Rate	Rate Units	Application Width Or Area	Rate Units	Notes
Spreader	Solid spreader	20	Ton	10	Ton/A	30	Feet	

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

MANURE APPLICATIONS, Part 1

Application Date	Field Where Manure Will Be Applied	Source Of Manure	Application Equipment	Days To Incorp.	Rate (/Acre)	Rate Basis	Loads	Amount Applied	Area Covered (Acres)	Apply At Or For	Units
Sep 2015	Herman's	Feedlot	Spreader	2	10	Custom rate	37	740	74	2,900	Feet/ Load
Sep 2016	Tyler's	Feedlot	Spreader	2	19	Custom rate	80	1,600	84.2	1,530	Feet/ Load
Oct 2017	Interstate Past	Feedlot	Spreader	5	10	Custom rate	33.9	678	67.8	2,900	Feet/ Load
Oct 2017	Stabler's	Feedlot	Spreader	2	15	Custom rate	55	1,100	73.3	1,940	Feet/ Load
Oct 2018	Tyler's	Feedlot	Spreader	2	10	Custom rate	24	480	48	2,900	Feet/ Load
Oct 2018	Herman's	Feedlot	Spreader	2	10	Custom rate	57	1,140	114	2,900	Feet/ Load
Sep 2019	Interstate Past	Feedlot	Spreader	5	15	Custom rate	37.8	756	50.4	1,940	Feet/ Load
Sep 2019	Stabler's	Feedlot	Spreader	2	10	Custom rate	37	740	74	2,900	Feet/ Load

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

MANURE APPLICATIONS, Part 2

Application Date	Field Where Manure Will Be Applied	Avail. N (Lb/A)	N Balance (Lb/A)	Avail. P_2O_5 (Lb/A)	P_2O_5 Balance (Lb/A)	Avail. K_2O (Lb/A)	K_2O Balance (Lb/A)	Notes
Sep 2015	Herman's	34	-182	120	95	288	238	
Sep 2016	Tyler's	65	-196	228	203	547	512	
Oct 2017	Interstate Past	28	3	120	90	288	243	
Oct 2017	Stabler's	51	-210	180	155	432	397	
Oct 2018	Tyler's	34	-221	120	95	288	253	
Oct 2018	Herman's	34	-182	120	95	288	238	
Sep 2019	Interstate Past	42	20	180	150	432	387	
Sep 2019	Stabler's	34	38	120	95	288	253	

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

FERTILIZER APPLICATIONS

Application Date	Field Where Fertilizer Will Be Applied	Nutrient Source	Rate	Units	Rate Basis	Application Method	Area Covered (Acres)	N Applied (Lb/A)	P_2O_5 Applied (Lb/A)	K_2O Applied (Lb/A)	Notes
Apr 2015	Interstate Crop	Analysis Not Specified				Surface broadcast/incorporate	33.7	24	20		
Apr 2015	Feedlot	Analysis Not Specified				Surface broadcast/incorporate	19.6		20	0	
Apr 2015	Derenburger	Analysis Not Specified				Surface broadcast/incorporate	73.5	133	20	0	
Apr 2015	Tyler's	Analysis Not Specified				Surface broadcast/incorporate	85.21	0	100	250	
Apr 2015	Herman's	Analysis Not Specified				Surface broadcast/incorporate	115.4	162	116	267	
Apr 2015	Stabler's	Analysis Not Specified				Surface broadcast/incorporate	74.3	0	116	267	
Apr 2016	Interstate Crop	Analysis Not Specified				Surface broadcast/incorporate	33.7	261	20		
Apr 2016	Feedlot	Analysis Not Specified				Surface broadcast/incorporate	19.6		20		
Apr 2016	Derenburger	Analysis Not Specified				Surface broadcast/incorporate	73.5	261	20	0	
Apr 2016	Tyler's	Analysis Not Specified				Surface broadcast/incorporate	85.21	229	100	200	
Apr 2016	Herman's	Analysis Not Specified				Surface broadcast/incorporate	115.4	194	31	0	
Apr 2016	Stabler's	Analysis Not Specified				Surface broadcast/incorporate	74.3	133	116	267	
Apr 2017	Interstate Crop	Analysis Not Specified				Surface broadcast/incorporate	33.7	261	20	0	
Apr 2017	Feedlot	Analysis Not Specified				Surface broadcast/incorporate	19.6	120	20		
Apr 2017	Derenburger	Analysis Not Specified				Surface broadcast/incorporate	73.5	261	20		

Manure Management Plan Data

Operation: Niedge Farms Feedlot
Plan File: Niedge.mmp
Plan Folder: C:\Home\Rusty.Irion\Bice Feedlot

County: Custer
State: Montana

Plan Saved: 4/30/2015
Init. File Rev: 12/10/2013
Soils File Rev: 12/5/2013

Application Date	Field Where Fertilizer Will Be Applied	Nutrient Source	Rate	Units	Rate Basis	Application Method	Area Covered (Acres)	N Applied (Lb/A)	P_2O_5 Applied (Lb/A)	K_2O Applied (Lb/A)	Notes
Apr 2017	Tyler's	Analysis Not Specified				Surface broadcast	85.21	196	0	0	
Apr 2017	Herman's	Analysis Not Specified				Surface broadcast/incorporate	115.4	205	100	0	
Apr 2017	Stabler's	Analysis Not Specified				Surface broadcast/incorporate	74.3	261	100	200	
Apr 2018	Interstate Crop	Analysis Not Specified				Surface broadcast/incorporate	33.7	260	20		
Apr 2018	Feedlot	Analysis Not Specified				Surface broadcast/incorporate	19.6	261	20		
Apr 2018	Derenburger	Analysis Not Specified				Surface broadcast/incorporate	73.5	261	20		
Apr 2018	Tyler's	Analysis Not Specified				Surface broadcast	85.21	250	0	0	
Apr 2018	Herman's	Analysis Not Specified				Surface broadcast/incorporate	115.4	215	108	0	
Apr 2018	Stabler's	Analysis Not Specified				Surface broadcast	74.3	210	0	0	
Apr 2019	Interstate Crop	Analysis Not Specified				Surface broadcast/incorporate	33.7	260	20		
Apr 2019	Feedlot	Analysis Not Specified				Surface broadcast/incorporate	19.6	261	20		
Apr 2019	Derenburger	Analysis Not Specified				Surface broadcast/incorporate	73.5	260	20		
Apr 2019	Tyler's	Analysis Not Specified				Surface broadcast/incorporate	85.21	236	25	90	
Apr 2019	Herman's	Analysis Not Specified				Surface broadcast	115.4	182	0	0	
Apr 2019	Stabler's	Analysis Not Specified				Surface broadcast/incorporate	74.3	250	50	100	

Field Nutrient Status Details

Plan File: C:\Home\Rusty.Irion\Bice Feedlot\Niedge.mmp
Operation: Niedge Farms Feedlot
State: Montana
Last Saved: 4/30/2015
Init. File Rev: 12/10/2013

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2015	Interstate	Crop	Crop Fertilizer Recs	Corn, silage	29 Ton	33.7	24¤	25¤	35¤
2015	Interstate	Crop	Crop Nutrient Removal	Corn, silage	29 Ton	33.7	223	116	267

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
Apr 15	Interstate	Crop	Fertilizer App	Not Specified	Surface broadcast/incorporate		33.7	24	20	
2015	Interstate	Crop	Total Nutrients Applied	Spreadable Area			33.7	24	20	0
2015	Interstate	Crop	Balance After Recs	Spreadable Area			33.7	0	-5	-35
2015	Interstate	Crop	Balance After Removal	Spreadable Area			33.7	-199	-96	-267

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2016	Interstate	Crop	Crop Fertilizer Recs	Corn, silage	29 Ton	33.7	261¤	25¤	35¤
2016	Interstate	Crop	Crop Nutrient Removal	Corn, silage	29 Ton	33.7	223	116	267

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
Apr 16	Interstate	Crop	Fertilizer App	Not Specified	Surface broadcast/incorporate		33.7	261	20	
2016	Interstate	Crop	Total Nutrients Applied	Spreadable Area			33.7	261	20	0
2016	Interstate	Crop	Balance After Recs	Spreadable Area			33.7	0	-5	-35
2016	Interstate	Crop	Balance After Removal	Spreadable Area			33.7	38	-96	-267

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2017	Interstate	Crop	Crop Fertilizer Recs	Corn, silage	29 Ton	33.7	261¤	25¤	35¤
2017	Interstate	Crop	Crop Nutrient Removal	Corn, silage	29 Ton	33.7	223	116	267

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
Apr 17	Interstate	Crop	Fertilizer App	Not Specified	Surface broadcast/incorporate		33.7	261	20	0
2017	Interstate	Crop	Total Nutrients Applied	Spreadable Area			33.7	261	20	0
2017	Interstate	Crop	Balance After Recs	Spreadable Area			33.7	0	-5	-35
2017	Interstate	Crop	Balance After Removal	Spreadable Area			33.7	38	-96	-267

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2018	Interstate	Crop	Crop Fertilizer Recs	Corn, silage	29 Ton	33.7	261¤	25¤	35¤
2018	Interstate	Crop	Crop Nutrient Removal	Corn, silage	29 Ton	33.7	223	116	267

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
Apr 18	Interstate	Crop	Fertilizer App	Not Specified	Surface broadcast/incorporate		33.7	260	20	
2018	Interstate	Crop	Total Nutrients Applied	Spreadable Area			33.7	260	20	0
2018	Interstate	Crop	Balance After Recs	Spreadable Area			33.7	-1	-5	-35
2018	Interstate	Crop	Balance After Removal	Spreadable Area			33.7	37	-96	-267

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2019	Interstate	Crop	Crop Fertilizer Recs	Corn, silage	29 Ton	33.7	261¤	25¤	35¤
2019	Interstate	Crop	Crop Nutrient Removal	Corn, silage	29 Ton	33.7	223	116	267

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
Apr 19	Interstate	Crop	Fertilizer App	Not Specified	Surface broadcast/incorporate		33.7	260	20	
2019	Interstate	Crop	Total Nutrients Applied	Spreadable Area			33.7	260	20	0
2019	Interstate	Crop	Balance After Recs	Spreadable Area			33.7	-1	-5	-35
2019	Interstate	Crop	Balance After Removal	Spreadable Area			33.7	37	-96	-267

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2015	Interstate	Past	Crop Fertilizer Recs	Grass	1 Ton	71.2	25¤	30¤	45¤
2015	Interstate	Past	Crop Nutrient Removal	Grass	1 Ton	71.2	25	10	38

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
2015	Interstate	Past	Total Nutrients Applied	Spreadable Area			71.2	0	0	0
2015	Interstate	Past	Balance After Recs	Spreadable Area			71.2	-25	-30	-45
2015	Interstate	Past	Balance After Removal	Spreadable Area			71.2	-25	-10	-38

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2016	Interstate	Past	Crop Fertilizer Recs	Grass	1 Ton	71.2	25¤	30¤	45¤
2016	Interstate	Past	Crop Nutrient Removal	Grass	1 Ton	71.2	25	10	38

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
2016	Interstate	Past	Total Nutrients Applied	Spreadable Area			71.2	0	0	0
2016	Interstate	Past	Balance After Recs	Spreadable Area			71.2	-25	-30	-45
2016	Interstate	Past	Balance After Removal	Spreadable Area			71.2	-25	-10	-38

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2017	Interstate	Past	Crop Fertilizer Recs	Grass	1 Ton	71.2	25¤	30¤	45¤
2017	Interstate	Past	Crop Nutrient Removal	Grass	1 Ton	71.2	25	10	38

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
2017	Interstate	Past	Total Nutrients Applied	Spreadable Area			71.2	0	0	0
2017	Interstate	Past	Balance After Recs	Spreadable Area			71.2	-25	-30	-45
2017	Interstate	Past	Balance After Removal	Spreadable Area			71.2	-25	-10	-38

Year	Field ID	Sub ID	Nutrient Needs	Crop	Yield Goal	Acres	N	P_2O_5	K_2O
2018	Interstate	Past	Crop Fertilizer Recs	Grass	1 Ton	71.2	25¤	30¤	45¤
2018	Interstate	Past	Crop Nutrient Removal	Grass	1 Ton	71.2	25	10	38

Date	Field ID	Sub ID	Nutrient Activity	Source	Equipment/Method	Rate	Acres	N	P_2O_5	K_2O
Oct 17	Interstate	Past	Manure App	Feedlot	Spreader	10 Ton	67.8	28	120	288
2018	Interstate	Past	Total Nutrients Applied	Spreadable Area			71.2	27	114	274

2018	Interstate	Past	Balance After Recs	Spreadable Area			71.2	2	84	229
2018	Interstate	Past	Balance After Removal	Spreadable Area			71.2	2	104	236

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Interstate	Past	Crop Fertilizer Recs	Grass		1 Ton	71.2	25¤	30¤	45¤
2019	Interstate	Past	Crop Nutrient Removal	Grass		1 Ton	71.2	25	10	38

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Interstate	Past	Residual Manure N				71.2	7		
2019	Interstate	Past	Total Nutrients Applied	Spreadable Area			71.2	7	0	0
2019	Interstate	Past	Balance After Recs	Spreadable Area			71.2	-18	54	184
2019	Interstate	Past	Balance After Removal	Spreadable Area			71.2	-18	94	198

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Feedlot		Crop Fertilizer Recs	Corn, silage		29 Ton	18.9	0¤	25¤	35¤
2015	Feedlot		Crop Nutrient Removal	Corn, silage		29 Ton	18.9	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		18.9		20	0
2015	Feedlot		Total Nutrients Applied	Spreadable Area			18.9	0	20	0
2015	Feedlot		Balance After Recs	Spreadable Area			18.9	0	-5	-35
2015	Feedlot		Balance After Removal	Spreadable Area			18.9	-223	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Feedlot		Crop Fertilizer Recs	Corn, silage		29 Ton	18.9	0¤	25¤	35¤
2016	Feedlot		Crop Nutrient Removal	Corn, silage		29 Ton	18.9	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		18.9		20	
2016	Feedlot		Total Nutrients Applied	Spreadable Area			18.9	0	20	0
2016	Feedlot		Balance After Recs	Spreadable Area			18.9	0	-5	-35
2016	Feedlot		Balance After Removal	Spreadable Area			18.9	-223	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Feedlot		Crop Fertilizer Recs	Corn, silage		29 Ton	18.9	120¤	25¤	35¤
2017	Feedlot		Crop Nutrient Removal	Corn, silage		29 Ton	18.9	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 17	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		18.9	120	20	
2017	Feedlot		Total Nutrients Applied	Spreadable Area			18.9	120	20	0
2017	Feedlot		Balance After Recs	Spreadable Area			18.9	0	-5	-35
2017	Feedlot		Balance After Removal	Spreadable Area			18.9	-103	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Feedlot		Crop Fertilizer Recs	Corn, silage		29 Ton	18.9	261¤	25¤	35¤

2018	Feedlot		Crop Nutrient Removal	Corn, silage		29 Ton	18.9	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 18	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		18.9	261	20	
2018	Feedlot		Total Nutrients Applied	Spreadable Area			18.9	261	20	0
2018	Feedlot		Balance After Recs	Spreadable Area			18.9	0	-5	-35
2018	Feedlot		Balance After Removal	Spreadable Area			18.9	38	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Feedlot		Crop Fertilizer Recs	Corn, silage	29 Ton	18.9	261¤	25¤	35¤
2019	Feedlot		Crop Nutrient Removal	Corn, silage	29 Ton	18.9	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 19	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		18.9	261	20	
2019	Feedlot		Total Nutrients Applied	Spreadable Area			18.9	261	20	0
2019	Feedlot		Balance After Recs	Spreadable Area			18.9	0	-5	-35
2019	Feedlot		Balance After Removal	Spreadable Area			18.9	38	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Feedlot		Crop Fertilizer Recs	Corn, silage	29 Ton	0.7	0¤	25¤	35¤
2015	Feedlot		Crop Nutrient Removal	Corn, silage	29 Ton	0.7	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.7		20	0
2015	Feedlot		Total Nutrients Applied	Non-spreadable Area			0.7	0	20	0
2015	Feedlot		Balance After Recs	Non-spreadable Area			0.7	0	-5	-35
2015	Feedlot		Balance After Removal	Non-spreadable Area			0.7	-223	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Feedlot		Crop Fertilizer Recs	Corn, silage	29 Ton	0.7	0¤	25¤	35¤
2016	Feedlot		Crop Nutrient Removal	Corn, silage	29 Ton	0.7	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.7		20	
2016	Feedlot		Total Nutrients Applied	Non-spreadable Area			0.7	0	20	0
2016	Feedlot		Balance After Recs	Non-spreadable Area			0.7	0	-5	-35
2016	Feedlot		Balance After Removal	Non-spreadable Area			0.7	-223	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Feedlot		Crop Fertilizer Recs	Corn, silage	29 Ton	0.7	120¤	25¤	35¤
2017	Feedlot		Crop Nutrient Removal	Corn, silage	29 Ton	0.7	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 17	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.7	120	20	

2017	Feedlot		Total Nutrients Applied	Non-spreadable Area			0.7	120	20	0
2017	Feedlot		Balance After Recs	Non-spreadable Area			0.7	0	-5	-35
2017	Feedlot		Balance After Removal	Non-spreadable Area			0.7	-103	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Feedlot		Crop Fertilizer Recs	Corn, silage		29 Ton	0.7	261¤	25¤	35¤
2018	Feedlot		Crop Nutrient Removal	Corn, silage		29 Ton	0.7	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 18	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.7	261	20	
2018	Feedlot		Total Nutrients Applied	Non-spreadable Area			0.7	261	20	0
2018	Feedlot		Balance After Recs	Non-spreadable Area			0.7	0	-5	-35
2018	Feedlot		Balance After Removal	Non-spreadable Area			0.7	38	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Feedlot		Crop Fertilizer Recs	Corn, silage		29 Ton	0.7	261¤	25¤	35¤
2019	Feedlot		Crop Nutrient Removal	Corn, silage		29 Ton	0.7	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 19	Feedlot		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.7	261	20	
2019	Feedlot		Total Nutrients Applied	Non-spreadable Area			0.7	261	20	0
2019	Feedlot		Balance After Recs	Non-spreadable Area			0.7	0	-5	-35
2019	Feedlot		Balance After Removal	Non-spreadable Area			0.7	38	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	71	133¤	25¤	35¤
2015	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	71	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		71	133	20	0
2015	Derenburger		Total Nutrients Applied	Spreadable Area			71	133	20	0
2015	Derenburger		Balance After Recs	Spreadable Area			71	0	-5	-35
2015	Derenburger		Balance After Removal	Spreadable Area			71	-90	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	71	261¤	25¤	35¤
2016	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	71	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		71	261	20	0
2016	Derenburger		Total Nutrients Applied	Spreadable Area			71	261	20	0
2016	Derenburger		Balance After Recs	Spreadable Area			71	0	-5	-35
2016	Derenburger		Balance After Removal	Spreadable Area			71	38	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*

2017	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	71	261¤	25¤	35¤
2017	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	71	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 17	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		71	261	20	
2017	Derenburger		Total Nutrients Applied	Spreadable Area			71	261	20	0
2017	Derenburger		Balance After Recs	Spreadable Area			71	0	-5	-35
2017	Derenburger		Balance After Removal	Spreadable Area			71	38	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	71	261¤	25¤	35¤
2018	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	71	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 18	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		71	261	20	
2018	Derenburger		Total Nutrients Applied	Spreadable Area			71	261	20	0
2018	Derenburger		Balance After Recs	Spreadable Area			71	0	-5	-35
2018	Derenburger		Balance After Removal	Spreadable Area			71	38	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	71	261¤	25¤	35¤
2019	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	71	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 19	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		71	260	20	
2019	Derenburger		Total Nutrients Applied	Spreadable Area			71	260	20	0
2019	Derenburger		Balance After Recs	Spreadable Area			71	-1	-5	-35
2019	Derenburger		Balance After Removal	Spreadable Area			71	37	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	2.5	133¤	25¤	35¤
2015	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	2.5	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		2.5	133	20	0
2015	Derenburger		Total Nutrients Applied	Non-spreadable Area			2.5	133	20	0
2015	Derenburger		Balance After Recs	Non-spreadable Area			2.5	0	-5	-35
2015	Derenburger		Balance After Removal	Non-spreadable Area			2.5	-90	-96	-267

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	2.5	261¤	25¤	35¤
2016	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	2.5	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		2.5	261	20	0

2016	Derenburger		Total Nutrients Applied	Non-spreadable Area			2.5	261	20	0
2016	Derenburger		Balance After Recs	Non-spreadable Area			2.5	0	-5	-35
2016	Derenburger		Balance After Removal	Non-spreadable Area			2.5	38	-96	-267
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	2.5	261¤	25¤	35¤
2017	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	2.5	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 17	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		2.5	261	20	
2017	Derenburger		Total Nutrients Applied	Non-spreadable Area			2.5	261	20	0
2017	Derenburger		Balance After Recs	Non-spreadable Area			2.5	0	-5	-35
2017	Derenburger		Balance After Removal	Non-spreadable Area			2.5	38	-96	-267
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	2.5	261¤	25¤	35¤
2018	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	2.5	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 18	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		2.5	261	20	
2018	Derenburger		Total Nutrients Applied	Non-spreadable Area			2.5	261	20	0
2018	Derenburger		Balance After Recs	Non-spreadable Area			2.5	0	-5	-35
2018	Derenburger		Balance After Removal	Non-spreadable Area			2.5	38	-96	-267
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Derenburger		Crop Fertilizer Recs	Corn, silage		29 Ton	2.5	261¤	25¤	35¤
2019	Derenburger		Crop Nutrient Removal	Corn, silage		29 Ton	2.5	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 19	Derenburger		Fertilizer App	Not Specified	Surface broadcast/incorporate		2.5	260	20	
2019	Derenburger		Total Nutrients Applied	Non-spreadable Area			2.5	260	20	0
2019	Derenburger		Balance After Recs	Non-spreadable Area			2.5	-1	-5	-35
2019	Derenburger		Balance After Removal	Non-spreadable Area			2.5	37	-96	-267
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	84.3	0¤	25¤	35¤
2015	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	84.3	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Tyler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		84.3	0	100	250
2015	Tyler's		Total Nutrients Applied	Spreadable Area			84.3	0	100	250
2015	Tyler's		Balance After Recs	Spreadable Area			84.3	0	75	215
2015	Tyler's		Balance After Removal	Spreadable Area			84.3	-223	-16	-17

Year	Field ID	Sub ID	Nutrient Needs	Crop		Yield Goal	Acres	N	P_2O_5	K_2O
2016	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	84.3	229¤	25¤	35¤
2016	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	84.3	223	116	267
Date	**Field ID**	**Sub ID**	**Nutrient Activity**	**Source**	**Equipment/Method**	**Rate**	**Acres**	**N**	**P_2O_5**	**K_2O**
Apr 16	Tyler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		84.3	229	100	200
2016	Tyler's		Total Nutrients Applied	Spreadable Area			84.3	229	100	200
2016	Tyler's		Balance After Recs	Spreadable Area			84.3	0	150	380
2016	Tyler's		Balance After Removal	Spreadable Area			84.3	6	-16	-67
Year	**Field ID**	**Sub ID**	**Nutrient Needs**	**Crop**		**Yield Goal**	**Acres**	**N**	**P_2O_5**	**K_2O**
2017	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	84.3	261¤	25¤	35¤
2017	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	84.3	223	116	267
Date	**Field ID**	**Sub ID**	**Nutrient Activity**	**Source**	**Equipment/Method**	**Rate**	**Acres**	**N**	**P_2O_5**	**K_2O**
Sep 16	Tyler's		Manure App	Feedlot	Spreader	19 Ton	84.2	65	228	547
Apr 17	Tyler's		Fertilizer App	Not Specified	Surface broadcast		84.3	196	0	0
2017	Tyler's		Total Nutrients Applied	Spreadable Area			84.3	261	228	546
2017	Tyler's		Balance After Recs	Spreadable Area			84.3	0	353	891
2017	Tyler's		Balance After Removal	Spreadable Area			84.3	38	112	279
Year	**Field ID**	**Sub ID**	**Nutrient Needs**	**Crop**		**Yield Goal**	**Acres**	**N**	**P_2O_5**	**K_2O**
2018	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	84.3	261¤	25¤	35¤
2018	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	84.3	223	116	267
Date	**Field ID**	**Sub ID**	**Nutrient Activity**	**Source**	**Equipment/Method**	**Rate**	**Acres**	**N**	**P_2O_5**	**K_2O**
2018	Tyler's		Residual Manure N				84.3	13		
Apr 18	Tyler's		Fertilizer App	Not Specified	Surface broadcast		84.3	250	0	0
2018	Tyler's		Total Nutrients Applied	Spreadable Area			84.3	263	0	0
2018	Tyler's		Balance After Recs	Spreadable Area			84.3	2	328	856
2018	Tyler's		Balance After Removal	Spreadable Area			84.3	40	-4	12
Year	**Field ID**	**Sub ID**	**Nutrient Needs**	**Crop**		**Yield Goal**	**Acres**	**N**	**P_2O_5**	**K_2O**
2019	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	84.3	261¤	25¤	35¤
2019	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	84.3	223	116	267
Date	**Field ID**	**Sub ID**	**Nutrient Activity**	**Source**	**Equipment/Method**	**Rate**	**Acres**	**N**	**P_2O_5**	**K_2O**
2019	Tyler's		Residual Manure N				84.3	6		
Oct 18	Tyler's		Manure App	Feedlot	Spreader	10 Ton	48.0	34	120	288
Apr 19	Tyler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		84.3	236	25	90
2019	Tyler's		Total Nutrients Applied	Spreadable Area			84.3	261	93	254
2019	Tyler's		Balance After Recs	Spreadable Area			84.3	0	396	1075
2019	Tyler's		Balance After Removal	Spreadable Area			84.3	38	-23	-1
Year	**Field ID**	**Sub ID**	**Nutrient Needs**	**Crop**		**Yield Goal**	**Acres**	**N**	**P_2O_5**	**K_2O**

2015	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.91	0¤	25¤	35¤
2015	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.91	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Tyler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.91	0	100	250
2015	Tyler's		Total Nutrients Applied	Non-spreadable Area			0.91	0	100	250
2015	Tyler's		Balance After Recs	Non-spreadable Area			0.91	0	75	215
2015	Tyler's		Balance After Removal	Non-spreadable Area			0.91	-223	-16	-17
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.91	229¤	25¤	35¤
2016	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.91	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Tyler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.91	229	100	200
2016	Tyler's		Total Nutrients Applied	Non-spreadable Area			0.91	229	100	200
2016	Tyler's		Balance After Recs	Non-spreadable Area			0.91	0	150	380
2016	Tyler's		Balance After Removal	Non-spreadable Area			0.91	6	-16	-67
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.91	261¤	25¤	35¤
2017	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.91	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 17	Tyler's		Fertilizer App	Not Specified	Surface broadcast		0.91	196	0	0
2017	Tyler's		Total Nutrients Applied	Non-spreadable Area			0.91	196	0	0
2017	Tyler's		Balance After Recs	Non-spreadable Area			0.91	-65	125	345
2017	Tyler's		Balance After Removal	Non-spreadable Area			0.91	-27	-116	-267
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.91	261¤	25¤	35¤
2018	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.91	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 18	Tyler's		Fertilizer App	Not Specified	Surface broadcast		0.91	250	0	0
2018	Tyler's		Total Nutrients Applied	Non-spreadable Area			0.91	250	0	0
2018	Tyler's		Balance After Recs	Non-spreadable Area			0.91	-11	100	310
2018	Tyler's		Balance After Removal	Non-spreadable Area			0.91	27	-116	-267
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Tyler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.91	261¤	25¤	35¤
2019	Tyler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.91	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 19	Tyler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.91	236	25	90

2019	Tyler's		Total Nutrients Applied	Non-spreadable Area			0.91	236	25	90
2019	Tyler's		Balance After Recs	Non-spreadable Area			0.91	-25	100	365
2019	Tyler's		Balance After Removal	Non-spreadable Area			0.91	13	-91	-177

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Herman's		Crop Fertilizer Recs	Corn, silage		29 Ton	114.6	162¤	25¤	60¤
2015	Herman's		Crop Nutrient Removal	Corn, silage		29 Ton	114.6	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		114.6	162	116	267
2015	Herman's		Total Nutrients Applied	Spreadable Area			114.6	162	116	267
2015	Herman's		Balance After Recs	Spreadable Area			114.6	0	91	207
2015	Herman's		Balance After Removal	Spreadable Area			114.6	-61	0	0
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Herman's		Crop Fertilizer Recs	Corn, grain		180 Bu	114.6	216¤	25¤	50¤
2016	Herman's		Crop Nutrient Removal	Corn, grain		180 Bu	114.6	131	108	49
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Sep 15	Herman's		Manure App	Feedlot	Spreader	10 Ton	74.0	34	120	288
Apr 16	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		114.6	194	31	0
2016	Herman's		Total Nutrients Applied	Spreadable Area			114.6	216	108	186
2016	Herman's		Balance After Recs	Spreadable Area			114.6	0	174	343
2016	Herman's		Balance After Removal	Spreadable Area			114.6	85	0	137
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Herman's		Crop Fertilizer Recs	Corn, grain		180 Bu	114.6	216¤	25¤	50¤
2017	Herman's		Crop Nutrient Removal	Corn, grain		180 Bu	114.6	131	108	49
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Herman's		Residual Manure N				114.6	5		
Apr 17	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		114.6	205	100	0
2017	Herman's		Total Nutrients Applied	Spreadable Area			114.6	210	100	0
2017	Herman's		Balance After Recs	Spreadable Area			114.6	-6	249	293
2017	Herman's		Balance After Removal	Spreadable Area			114.6	79	-8	88
Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Herman's		Crop Fertilizer Recs	Corn, grain		180 Bu	114.6	216¤	25¤	50¤
2018	Herman's		Crop Nutrient Removal	Corn, grain		180 Bu	114.6	131	108	49
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Herman's		Residual Manure N				114.6	2		
Apr 18	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		114.6	215	108	0
2018	Herman's		Total Nutrients Applied	Spreadable Area			114.6	217	108	0
2018	Herman's		Balance After Recs	Spreadable Area			114.6	1	332	243

2018	Herman's		Balance After Removal	Spreadable Area			114.6	86	0	39

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Herman's		Crop Fertilizer Recs	Corn, grain		180 Bu	114.6	216¤	25¤	50¤
2019	Herman's		Crop Nutrient Removal	Corn, grain		180 Bu	114.6	131	108	49
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Oct 18	Herman's		Manure App	Feedlot	Spreader	10 Ton	114.0	34	120	288
Apr 19	Herman's		Fertilizer App	Not Specified	Surface broadcast		114.6	182	0	0
2019	Herman's		Total Nutrients Applied	Spreadable Area			114.6	216	119	286
2019	Herman's		Balance After Recs	Spreadable Area			114.6	0	426	479
2019	Herman's		Balance After Removal	Spreadable Area			114.6	85	11	276

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Herman's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.8	162¤	25¤	60¤
2015	Herman's		Crop Nutrient Removal	Corn, silage		29 Ton	0.8	223	116	267
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.8	162	116	267
2015	Herman's		Total Nutrients Applied	Non-spreadable Area			0.8	162	116	267
2015	Herman's		Balance After Recs	Non-spreadable Area			0.8	0	91	207
2015	Herman's		Balance After Removal	Non-spreadable Area			0.8	-61	0	0

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Herman's		Crop Fertilizer Recs	Corn, grain		180 Bu	0.8	216¤	25¤	50¤
2016	Herman's		Crop Nutrient Removal	Corn, grain		180 Bu	0.8	131	108	49
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.8	194	31	0
2016	Herman's		Total Nutrients Applied	Non-spreadable Area			0.8	194	31	0
2016	Herman's		Balance After Recs	Non-spreadable Area			0.8	-22	97	157
2016	Herman's		Balance After Removal	Non-spreadable Area			0.8	63	-77	-49

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Herman's		Crop Fertilizer Recs	Corn, grain		180 Bu	0.8	216¤	25¤	50¤
2017	Herman's		Crop Nutrient Removal	Corn, grain		180 Bu	0.8	131	108	49
Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 17	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.8	205	100	0
2017	Herman's		Total Nutrients Applied	Non-spreadable Area			0.8	205	100	0
2017	Herman's		Balance After Recs	Non-spreadable Area			0.8	-11	172	107
2017	Herman's		Balance After Removal	Non-spreadable Area			0.8	74	-8	-49

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Herman's		Crop Fertilizer Recs	Corn, grain		180 Bu	0.8	216¤	25¤	50¤

2018	Herman's		Crop Nutrient Removal	Corn, grain		180 Bu	0.8	131	108	49

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 18	Herman's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.8	215	108	0
2018	Herman's		Total Nutrients Applied	Non-spreadable Area			0.8	215	108	0
2018	Herman's		Balance After Recs	Non-spreadable Area			0.8	-1	255	57
2018	Herman's		Balance After Removal	Non-spreadable Area			0.8	84	0	-49

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Herman's		Crop Fertilizer Recs	Corn, grain	180 Bu	0.8	216¤	25¤	50¤
2019	Herman's		Crop Nutrient Removal	Corn, grain	180 Bu	0.8	131	108	49

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 19	Herman's		Fertilizer App	Not Specified	Surface broadcast		0.8	182	0	0
2019	Herman's		Total Nutrients Applied	Non-spreadable Area			0.8	182	0	0
2019	Herman's		Balance After Recs	Non-spreadable Area			0.8	-34	230	7
2019	Herman's		Balance After Removal	Non-spreadable Area			0.8	51	-108	-49

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Stabler's		Crop Fertilizer Recs	Corn, silage	29 Ton	73.4	0¤	25¤	35¤
2015	Stabler's		Crop Nutrient Removal	Corn, silage	29 Ton	73.4	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		73.4	0	116	267
2015	Stabler's		Total Nutrients Applied	Spreadable Area			73.4	0	116	267
2015	Stabler's		Balance After Recs	Spreadable Area			73.4	0	91	232
2015	Stabler's		Balance After Removal	Spreadable Area			73.4	-223	0	0

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Stabler's		Crop Fertilizer Recs	Corn, silage	29 Ton	73.4	133¤	25¤	35¤
2016	Stabler's		Crop Nutrient Removal	Corn, silage	29 Ton	73.4	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		73.4	133	116	267
2016	Stabler's		Total Nutrients Applied	Spreadable Area			73.4	133	116	267
2016	Stabler's		Balance After Recs	Spreadable Area			73.4	0	182	464
2016	Stabler's		Balance After Removal	Spreadable Area			73.4	-90	0	0

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*	*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2017	Stabler's		Crop Fertilizer Recs	Corn, silage	29 Ton	73.4	261¤	25¤	35¤
2017	Stabler's		Crop Nutrient Removal	Corn, silage	29 Ton	73.4	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 17	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		73.4	261	100	200

2017	Stabler's		Total Nutrients Applied	Spreadable Area			73.4	261	100	200
2017	Stabler's		Balance After Recs	Spreadable Area			73.4	0	257	629
2017	Stabler's		Balance After Removal	Spreadable Area			73.4	38	-16	-67

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2018	Stabler's		Crop Fertilizer Recs	Corn, silage		29 Ton	73.4	261¤	25¤	35¤
2018	Stabler's		Crop Nutrient Removal	Corn, silage		29 Ton	73.4	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Oct 17	Stabler's		Manure App	Feedlot	Spreader	15 Ton	73.3	51	180	432
Apr 18	Stabler's		Fertilizer App	Not Specified	Surface broadcast		73.4	210	0	0
2018	Stabler's		Total Nutrients Applied	Spreadable Area			73.4	261	180	431
2018	Stabler's		Balance After Recs	Spreadable Area			73.4	0	412	1025
2018	Stabler's		Balance After Removal	Spreadable Area			73.4	38	64	164

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Stabler's		Crop Fertilizer Recs	Corn, silage		29 Ton	73.4	261¤	25¤	35¤
2019	Stabler's		Crop Nutrient Removal	Corn, silage		29 Ton	73.4	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
2019	Stabler's		Residual Manure N				73.4	10		
Apr 19	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		73.4	250	50	100
2019	Stabler's		Total Nutrients Applied	Spreadable Area			73.4	260	50	100
2019	Stabler's		Balance After Recs	Spreadable Area			73.4	-1	437	1090
2019	Stabler's		Balance After Removal	Spreadable Area			73.4	37	-2	-3

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2015	Stabler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.9	0¤	25¤	35¤
2015	Stabler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.9	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 15	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.9	0	116	267
2015	Stabler's		Total Nutrients Applied	Non-spreadable Area			0.9	0	116	267
2015	Stabler's		Balance After Recs	Non-spreadable Area			0.9	0	91	232
2015	Stabler's		Balance After Removal	Non-spreadable Area			0.9	-223	0	0

Year	*Field ID*	*Sub ID*	*Nutrient Needs*	*Crop*		*Yield Goal*	*Acres*	*N*	*P_2O_5*	*K_2O*
2016	Stabler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.9	133¤	25¤	35¤
2016	Stabler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.9	223	116	267

Date	*Field ID*	*Sub ID*	*Nutrient Activity*	*Source*	*Equipment/Method*	*Rate*	*Acres*	*N*	*P_2O_5*	*K_2O*
Apr 16	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.9	133	116	267
2016	Stabler's		Total Nutrients Applied	Non-spreadable Area			0.9	133	116	267
2016	Stabler's		Balance After Recs	Non-spreadable Area			0.9	0	182	464
2016	Stabler's		Balance After Removal	Non-spreadable Area			0.9	-90	0	0

Year	Field ID	Sub ID	Nutrient Needs	Crop		Yield Goal	Acres	N	P_2O_5	K_2O
2017	Stabler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.9	261¤	25¤	35¤
2017	Stabler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.9	223	116	267
Date	**Field ID**	**Sub ID**	**Nutrient Activity**	**Source**	**Equipment/Method**	**Rate**	**Acres**	**N**	**P_2O_5**	**K_2O**
Apr 17	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.9	261	100	200
2017	Stabler's		Total Nutrients Applied	Non-spreadable Area			0.9	261	100	200
2017	Stabler's		Balance After Recs	Non-spreadable Area			0.9	0	257	629
2017	Stabler's		Balance After Removal	Non-spreadable Area			0.9	38	-16	-67
Year	**Field ID**	**Sub ID**	**Nutrient Needs**	**Crop**		**Yield Goal**	**Acres**	**N**	**P_2O_5**	**K_2O**
2018	Stabler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.9	261¤	25¤	35¤
2018	Stabler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.9	223	116	267
Date	**Field ID**	**Sub ID**	**Nutrient Activity**	**Source**	**Equipment/Method**	**Rate**	**Acres**	**N**	**P_2O_5**	**K_2O**
Apr 18	Stabler's		Fertilizer App	Not Specified	Surface broadcast		0.9	210	0	0
2018	Stabler's		Total Nutrients Applied	Non-spreadable Area			0.9	210	0	0
2018	Stabler's		Balance After Recs	Non-spreadable Area			0.9	-51	232	594
2018	Stabler's		Balance After Removal	Non-spreadable Area			0.9	-13	-116	-267
Year	**Field ID**	**Sub ID**	**Nutrient Needs**	**Crop**		**Yield Goal**	**Acres**	**N**	**P_2O_5**	**K_2O**
2019	Stabler's		Crop Fertilizer Recs	Corn, silage		29 Ton	0.9	261¤	25¤	35¤
2019	Stabler's		Crop Nutrient Removal	Corn, silage		29 Ton	0.9	223	116	267
Date	**Field ID**	**Sub ID**	**Nutrient Activity**	**Source**	**Equipment/Method**	**Rate**	**Acres**	**N**	**P_2O_5**	**K_2O**
Apr 19	Stabler's		Fertilizer App	Not Specified	Surface broadcast/incorporate		0.9	250	50	100
2019	Stabler's		Total Nutrients Applied	Non-spreadable Area			0.9	250	50	100
2019	Stabler's		Balance After Recs	Non-spreadable Area			0.9	-11	257	659
2019	Stabler's		Balance After Removal	Non-spreadable Area			0.9	27	-66	-167

Notes

(1) If a field has a non-spreadable area, it is listed in a separate section following the field's spreadable area.

(2) Yield Goal, Rate, N, P2O5 and K2O values are all per acre.

(3) The crop's N fertilizer rec accounts for any N credit from a previous legume crop.

(4) If a field has more than one manure application in the same crop year, or if the total area covered that year is less than or greater than the field's area, a field average is used in calculating balances. This field average is the sum of each manure application's area times its per-acre amount of nutrient applied, divided by the field's area.

(5) Any positive P2O5 or K2O balance is carried over to the next year. Available N not utilized in the current crop year is assumed lost.

¤ Indicates a custom fertilizer recommendation in the Crop Fertilizer Recs columns.

[a] Indicates in the Balance After Recs N column that the legume crop is assumed to utilize some or all of the supplied N.

AGVISE LABORATORIES
P.O. BOX 510, NORTHWOOD, ND 58267
Northwood: (701) 587-6010
Benson: (320) 843-4109

MANURE REPORT

SAMPLE **NEIDGE LIVESTOCK**
TYPE **Solid Manure**
SOURCE **Beef**
STORAGE
LAB NUM **NW32**

N
W E
S

SUBMITTED FOR:
NEIDGE LIVESTOCK

MILES CITY, MT

SUBMITTED BY: **CE0557**
AG PARTNERS-MILES CITY
3RD & ATLANTIC
BOX 1440
MILES CITY, MT 59301

MOISTURE	38
DRY MATTER	62

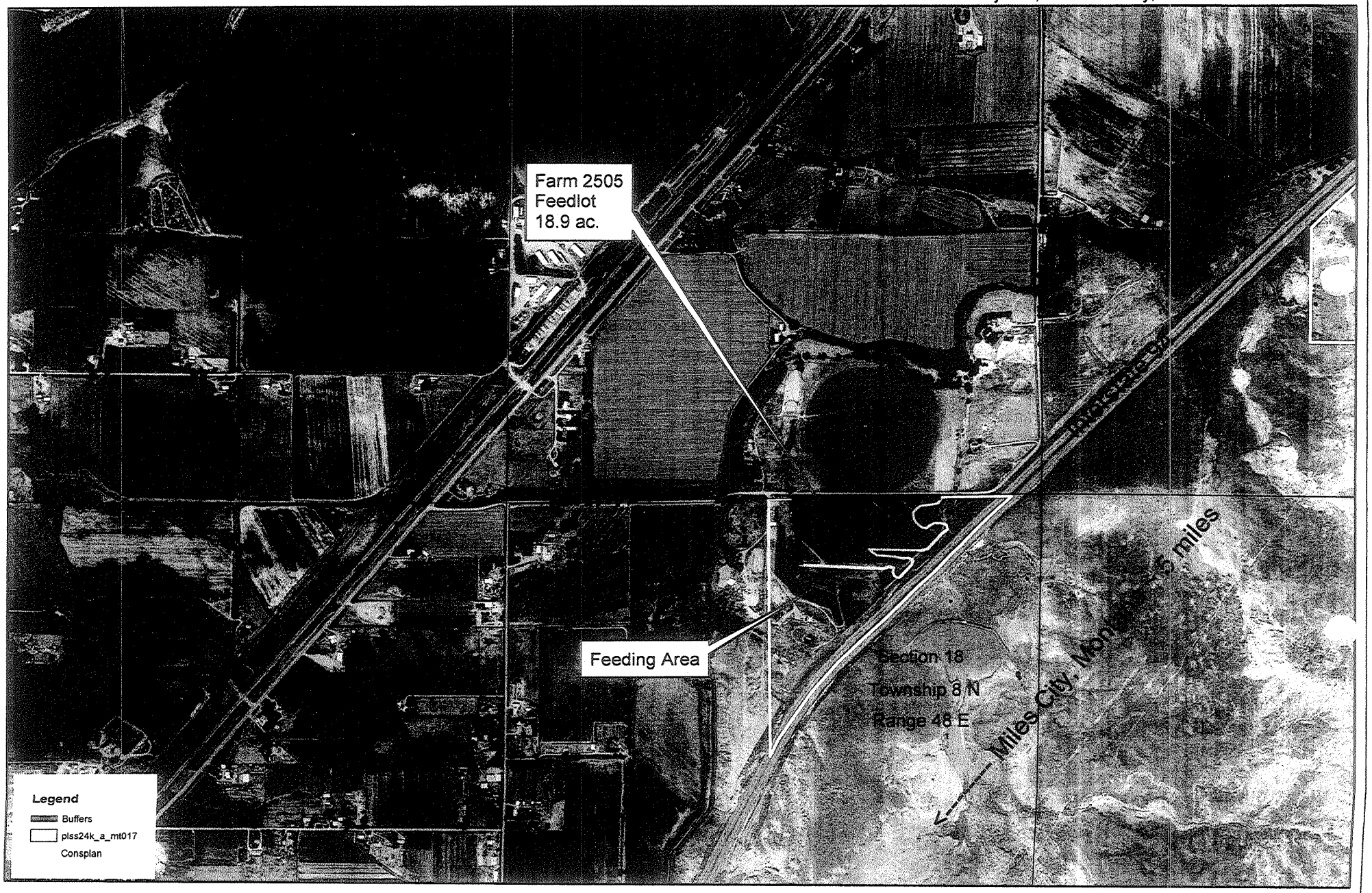
Date Sampled **03/26/15** Date Received **03/20/15** Date Reported **3/27/2015**

	Dry Basis	As Received	lbs/ton
Total Nitrogen (N):		0.69 %	14
Ammonium Nitrogen:			
Nitrate Nitrogen:			
Inorganic Nitrogen:			
Organic Nitrogen:			
Phosphate (P2O5):	1.2 %	0.74 %	15
Potash (K2O):	2.6 %	1.6 %	32
Sodium:	0.31 %	0.19 %	3.8
Calcium:	2.3 %	1.4 %	28
Magnesium:	1.00 %	0.61 %	12
Zinc:	158 ppm	97 ppm	0.19
Iron:	10339 ppm	6366 ppm	13
Manganese:	406 ppm	250 ppm	0.50
Copper:	39 ppm	24 ppm	0.049
Sulfur:	0.42 %	0.26 %	5.1
Chloride:			
pH:			
Salts:			
Total Carbon:			
Volatile Solids:			

Customer(s): NIEDGE LIVESTOCK LLC

Feedlot Location

Assisted By: RUSTY IRION
State and County: MT, Custer County, Montana



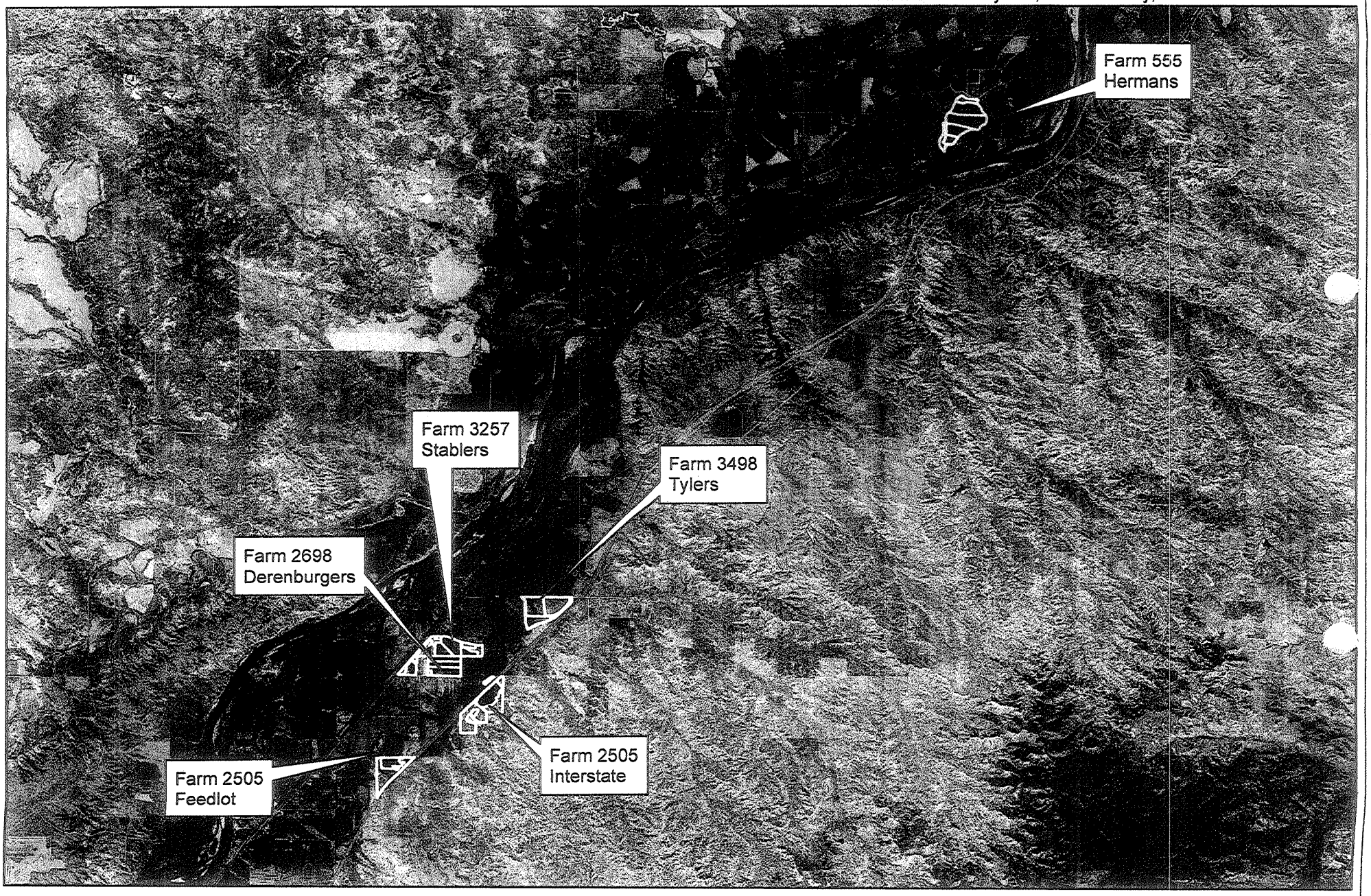
970 0 970 1,940 2,910 3,880
Feet

N

Customer(s): NIEDGE LIVESTOCK LLC

Land Application Fields

Assisted By: RUSTY IRION
State and County: MT, Custer County, Montana



6,200 0 6,200 12,400 18,600 24,800
Feet

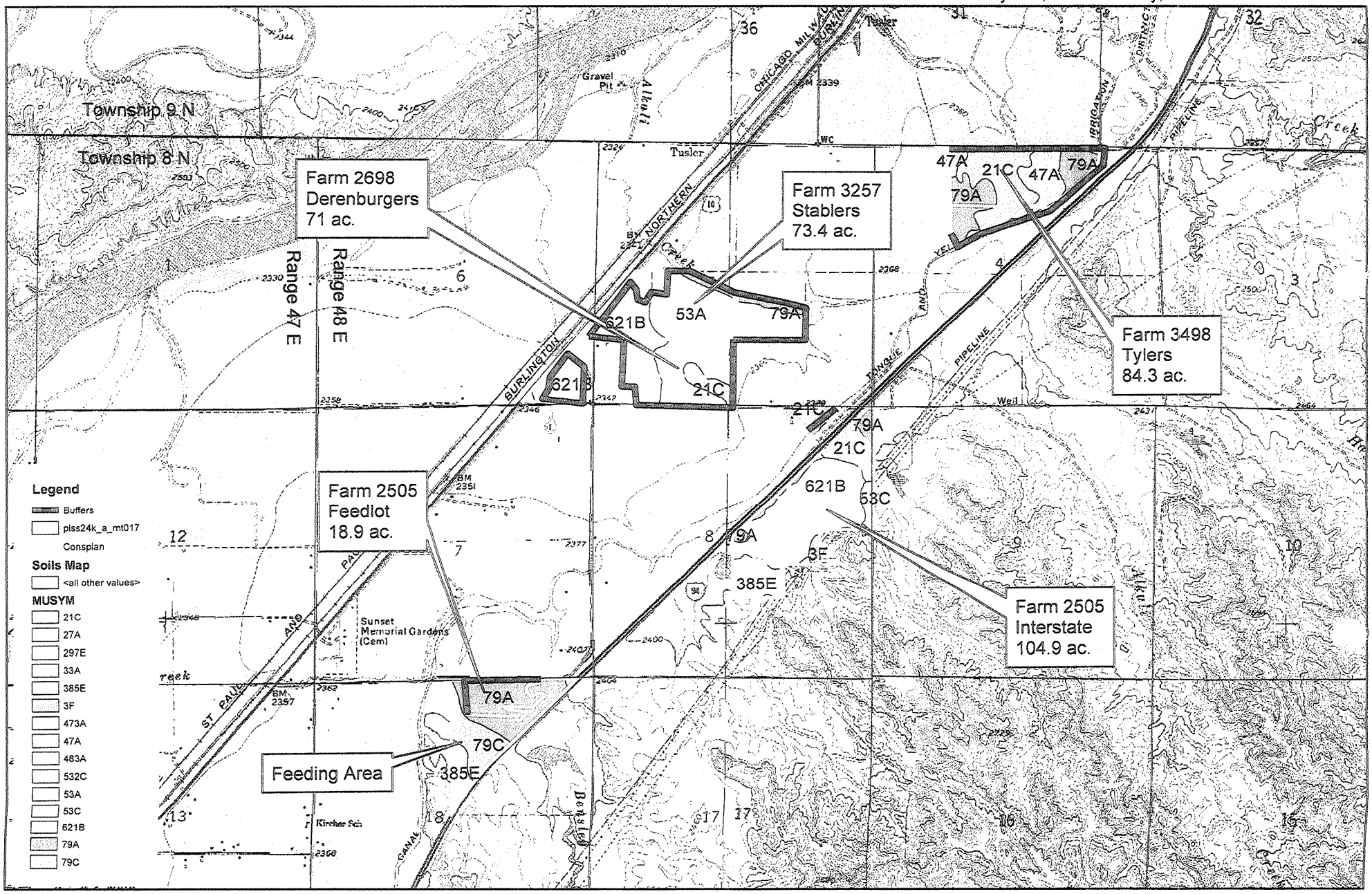
N

Customer(s): NIEDGE LIVESTOCK LLC

Land Application Fields

Assisted By: RUSTY IRION

State and County: MT, Custer County, Montana

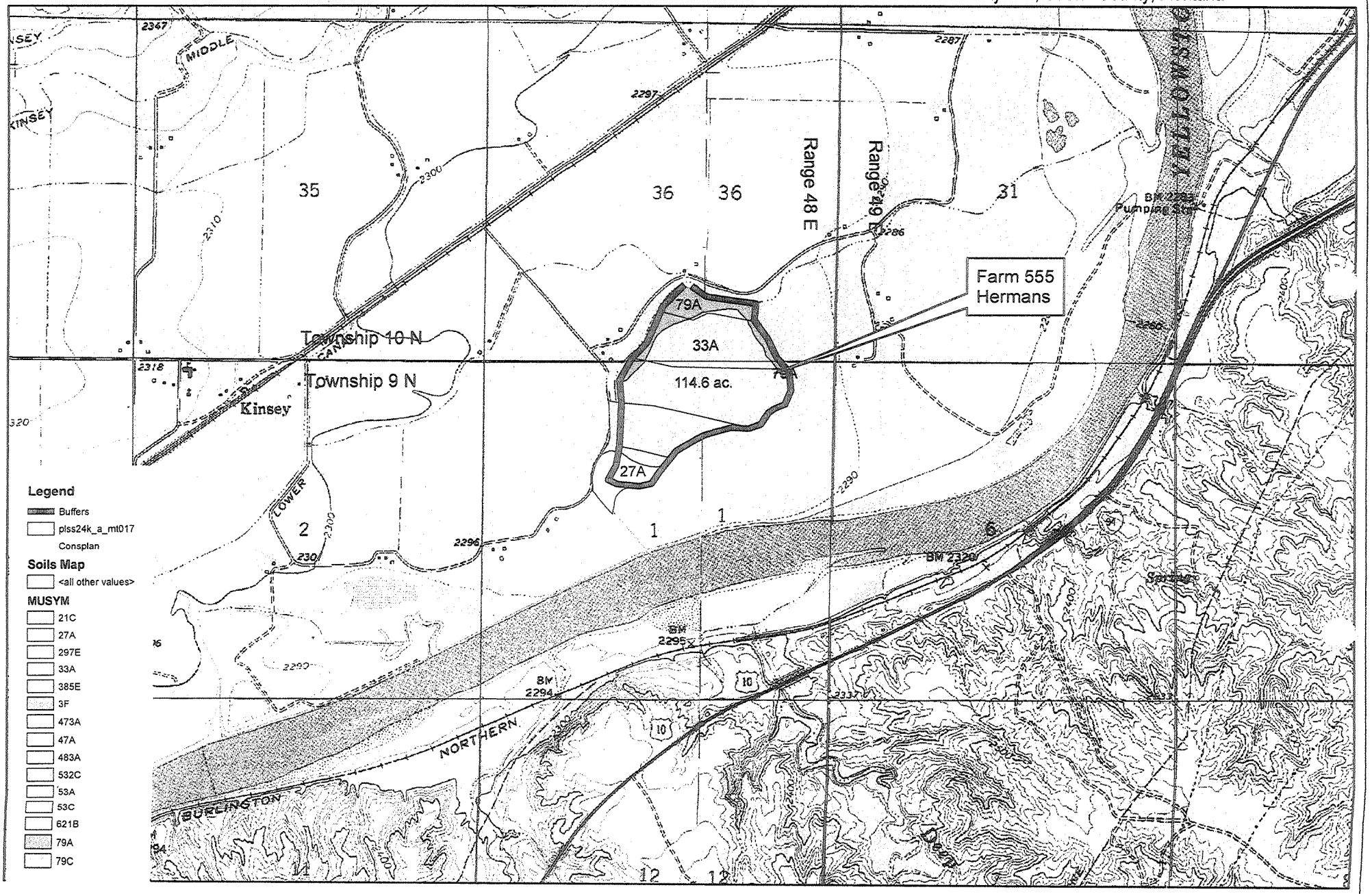


Customer(s): NIEDGE LIVESTOCK LLC

Land Application Fields

Assisted By: RUSTY IRION

State and County: MT, Custer County, Montana



Soils Inventory Report

Wed Apr 29 2015 22:13:28 GMT-0600 (Mountain Daylight Time)

NIEDGE LIVESTOCK LLC

Map Unit Symbol	Acres	Percent
21C	54.8	10%
27A	11.7	2%
297E	0.2	0%
33A	97	17%
385E	23.9	4%
3F	2.7	0%
473A	0.1	0%
47A	21.8	4%
483A	0.4	0%
532C	1.1	0%
53A	94.1	17%
53C	6.6	1%
621B	131.5	23%
79A	103.3	18%
79C	18.9	3%
Total:	568.1	100%

AGVISE LABORATORIES

Soil Analysis by Agvise Laboratories
(http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Interstate** CROP
SAMPLE ID FARM 2505
FIELD NAME
COUNTY
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Corn-Silage**

N
W E
S

SUBMITTED FOR:
Niedge Livestock

Miles City, MT

SUBMITTED BY: **CE0557**
AG PARTNERS-MILES CITY
3RD & ATLANTIC
BOX 1440
MILES CITY, MT 59301

REF # **1145467** BOX # **0**
LAB # **NW9928**

Date Sampled **03/17/2015** Date Received **03/23/2015** Date Reported **3/24/2015**

Nutrient In The Soil		Interpretation (VLow / Low / Med / High)
Nitrate 0-6"	120 lb/ac	
Nitrate 6-24"	117 lb/ac	*******
Nitrate 0-24"	237 lb/ac	
Phosphorus Olsen	47 ppm	*******
Potassium	276 ppm	*******
Chloride		
Sulfur 0-6"	106 lb/ac	*******
Sulfur 6-24"	234 lb/ac	*******
Boron		
Zinc	2.38 ppm	*******
Iron		
Manganese		
Copper		
Magnesium		
Calcium		
Sodium		
Org.Matter	4.3 %	*******
Carbonate(CCE)		
Sol. Salts 0-6"	0.61 mmho/cm	*******
Sol. Salts 6-24"	0.48 mmho/cm	*******

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Corn-Silage								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
29 Tons			0			0		
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	65		N			N		
P_2O_5	15	Band (2x2) *	P_2O_5			P_2O_5		
K_2O	10	Band (2x2) *	K_2O			K_2O		
Cl			Cl			Cl		
S	0		S			S		
B			B			B		
Zn	0		Zn			Zn		
Fe			Fe			Fe		
Mn			Mn			Mn		
Cu			Cu			Cu		
Mg			Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" 7.9 6-24" 8.2							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 104 K2O = 241 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

Soil Analysis by Agvise Laboratories
(http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Feedlot**
SAMPLE ID FARM 2505
FIELD NAME
COUNTY
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Corn-Silage**

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SUBMITTED FOR:
Niedge Livestock

Miles City, MT

SUBMITTED BY: **CE0557**
AG PARTNERS-MILES CITY
3RD & ATLANTIC
BOX 1440
MILES CITY, MT 59301

REF # **1145468** BOX # **0**
LAB # **NW9924**

Date Sampled **03/17/2015** Date Received **03/23/2015** Date Reported **3/24/2015**

Nutrient In The Soil		Interpretation (VLow / Low / Med / High)
Nitrate 0-6"	315 lb/ac	
Nitrate 6-24"	348 lb/ac	
Nitrate 0-24"	663 lb/ac	
Phosphorus Olsen	120 ppm	
Potassium	574 ppm	
Chloride		
Sulfur 0-6"	82 lb/ac	
Sulfur 6-24"	330 lb/ac	
Boron		
Zinc	6.00 ppm	
Iron		
Manganese		
Copper		
Magnesium		
Calcium		
Sodium		
Org.Matter	4.0 %	
Carbonate(CCE)		
Sol. Salts 0-6"	0.82 mmho/cm	
Sol. Salts 6-24"	0.57 mmho/cm	

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Corn-Silage								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
29 Tons			0			0		
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	10		N			N		
P_2O_5	0		P_2O_5			P_2O_5		
K_2O	10	Band (2x2) *	K_2O			K_2O		
Cl			Cl			Cl		
S	0		S			S		
B			B			B		
Zn	0		Zn			Zn		
Fe			Fe			Fe		
Mn			Mn			Mn		
Cu			Cu			Cu		
Mg			Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" 7.5							
6-24" 8.3							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 104 K2O = 241 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

Soil Analysis by Agvise Laboratories (http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Derenburger**
SAMPLE ID
FIELD NAME FARM 2698
COUNTY
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Corn-Silage**

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SUBMITTED FOR:
Niedge Livestock

Miles City, MT

SUBMITTED BY: **CE0557**
AG PARTNERS-MILES CITY
3RD & ATLANTIC
BOX 1440
MILES CITY, MT 59301

REF # **1145469** BOX # **0**
LAB # **NW9895**

Date Sampled **03/17/2015** Date Received **03/23/2015** Date Reported **3/24/2015**

Nutrient In The Soil		Interpretation (VLow / Low / Med / High)
Nitrate 0-6"	32 lb/ac	
Nitrate 6-24"	96 lb/ac	
Nitrate 0-24"	128 lb/ac	
Phosphorus Olsen	117 ppm	
Potassium	514 ppm	
Chloride		
Sulfur 0-6"	120 +lb/ac	
Sulfur 6-24"	360 +lb/ac	
Boron		
Zinc	11.02 ppm	
Iron		
Manganese		
Copper		
Magnesium		
Calcium		
Sodium		
Org.Matter	9.5 %	
Carbonate(CCE)		
Sol. Salts 0-6"	1.03 mmho/cm	
Sol. Salts 6-24"	0.98 mmho/cm	

	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
	Corn-Silage					
YIELD GOAL	29 Tons		0		0	
SUGGESTED GUIDELINES	Band/Maint.					
	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
N	174					
P_2O_5	0					
K_2O	10	Band (2x2) *				
Cl						
S	0					
B						
Zn	0					
Fe						
Mn						
Cu						
Mg						
Lime						

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" 7.7							
6-24" 8.1							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 104 K2O = 241 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

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Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Tylers**
SAMPLE ID FARM 3498
FIELD NAME
COUNTY
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Corn-Silage**

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SUBMITTED FOR:
Niedge Livestock

Miles City, MT

SUBMITTED BY: **CE0557**
AG PARTNERS-MILES CITY
3RD & ATLANTIC
BOX 1440
MILES CITY, MT 59301

REF # **1145470** BOX # **0**
LAB # **NW9919**

Date Sampled **03/17/2015** Date Received **03/23/2015** Date Reported **3/24/2015**

Nutrient In The Soil		Interpretation (VLow / Low / Med / High)
Nitrate 0-6"	59 lb/ac	
Nitrate 6-24"	234 lb/ac	
Nitrate 0-24"	293 lb/ac	
Phosphorus Olsen	6 ppm	
Potassium	246 ppm	
Chloride		
Sulfur 0-6"	52 lb/ac	
Sulfur 6-24"	360 +lb/ac	
Boron		
Zinc	0.93 ppm	
Iron		
Manganese		
Copper		
Magnesium		
Calcium		
Sodium		
Org.Matter	4.2 %	
Carbonate(CCE)		
Sol. Salts 0-6"	0.79 mmho/cm	
Sol. Salts 6-24"	1.55 mmho/cm	

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Corn-Silage								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
29 Tons			0			0		
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	10		N			N		
P_2O_5	104	Band *	P_2O_5			P_2O_5		
K_2O	241	Band *	K_2O			K_2O		
Cl			Cl			Cl		
S	0		S			S		
B			B			B		
Zn	3	Band	Zn			Zn		
Fe			Fe			Fe		
Mn			Mn			Mn		
Cu			Cu			Cu		
Mg			Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" 8.2 6-24" 8.7							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 104 K2O = 241 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

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(http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Hermans**
SAMPLE ID FARM 555
FIELD NAME
COUNTY
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Corn-Silage**

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SUBMITTED FOR:
Niedge Livestock

Miles City, MT

SUBMITTED BY: **CE0557**
AG PARTNERS-MILES CITY
3RD & ATLANTIC
BOX 1440
MILES CITY, MT 59301

REF # **1145471** BOX # **0**
LAB # **NW10024**

Date Sampled **03/17/2015** Date Received **03/23/2015** Date Reported **3/24/2015**

Nutrient In The Soil		Interpretation (VLow / Low / Med / High)
Nitrate 0-6"	18 lb/ac	
Nitrate 6-24"	81 lb/ac	
Nitrate 0-24"	99 lb/ac	
Phosphorus Olsen	20 ppm	
Potassium	197 ppm	
Chloride		
Sulfur 0-6"	38 lb/ac	
Sulfur 6-24"	144 lb/ac	
Boron		
Zinc	1.84 ppm	
Iron		
Manganese		
Copper		
Magnesium		
Calcium		
Sodium		
Org.Matter	1.5 %	
Carbonate(CCE)		
Sol. Salts 0-6"	0.43 mmho/cm	
Sol. Salts 6-24"	0.51 mmho/cm	

	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
	Corn-Silage					
	YIELD GOAL		YIELD GOAL		YIELD GOAL	
	29 Tons		0		0	
	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
	Band/Maint.					
	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
N	203					
P_2O_5	104	Band *				
K_2O	241	Band *				
Cl						
S	0					
B						
Zn	3	Band (Trial)				
Fe						
Mn						
Cu						
Mg						
Lime						

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range) % Ca	% Mg	% K	% Na	% H
0-6" 8.1							
6-24" 8.0							

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 104 K2O = 241 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

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AGVISE LABORATORIES

Soil Analysis by Agvise Laboratories
(http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **Stablers**
SAMPLE ID FARM 3257
FIELD NAME
COUNTY
TWP RANGE
SECTION QTR ACRES **0**
PREV. CROP **Corn-Silage**

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SUBMITTED FOR:
Niedge Livestock

Miles City, MT

SUBMITTED BY: **CE0557**
AG PARTNERS-MILES CITY
3RD & ATLANTIC
BOX 1440
MILES CITY, MT 59301

REF # **1145472** BOX # **0**
LAB # **NW10006**

Date Sampled **03/17/2015** Date Received **03/23/2015** Date Reported **3/24/2015**

Nutrient In The Soil		Interpretation (VLow / Low / Med / High)
Nitrate 0-6"	176 lb/ac	
Nitrate 6-24"	213 lb/ac	
Nitrate 0-24"	389 lb/ac	
Phosphorus Olsen	25 ppm	
Potassium	256 ppm	
Chloride		
Sulfur 0-6"	108 lb/ac	
Sulfur 6-24"	222 lb/ac	
Boron		
Zinc	1.42 ppm	
Iron		
Manganese		
Copper		
Magnesium		
Calcium		
Sodium		
Org.Matter	3.9 %	
Carbonate(CCE)		
Sol. Salts 0-6"	0.94 mmho/cm	
Sol. Salts 6-24"	0.67 mmho/cm	

	1st Crop Choice		2nd Crop Choice		3rd Crop Choice	
	Corn-Silage					
	YIELD GOAL		YIELD GOAL		YIELD GOAL	
	29 Tons		0		0	
	SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES	
	Band/Maint.					
	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION
N	10					
P_2O_5	104	Band *				
K_2O	10	Band (2x2) *				
Cl						
S	0					
B						
Zn	3	Band (Trial)				
Fe						
Mn						
Cu						
Mg						
Lime						

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" 8							
6-24" 1							

Thank You For Your Patronage!

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 104 K2O = 241 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

See Reverse Side For Important Information