



## TRENTON FARMS RE, LLC PROJECT SUMMARY

Trenton Farms RE, LLC, proposes to construct three hog confinement buildings in Grundy County, Section 19, Township 60 North Range 24 West. The site will consist of a gestation barn housing 4480 sows, a farrowing barn housing 936 sows and a Gilt Development Unit for 960 swine over 55 pounds and 320 nursery pigs. A composter will also be built on site. The site will have an animal unit capacity of 2282.4, making it a Class 1C Confined Animal Feeding Operation.

Manure will be stored in formed concrete structures below the Gestation Barn and GDU. Manure from the Farrowing Barn will drain into the Gestation Barn

Total storage capacity for the Gestation Barn will be 7,074,162 gallons, in excess of the Gestation Barn and Farrowing Barn's combined estimated annual manure production of 3,687,147 gallons. The GDU Barn will have 781,295 gallons of storage capacity, in excess of its estimated annual manure production of 530,368 gallons. The entire facility, therefore, has projected storage capacity in excess of 365 days.

Manure from Trenton Farms RE, LLC will be applied to fields listed in the site's Nutrient Management Plan at agronomic rates based on the crop uptake of nutrients and the nutrient analysis of the manure. Manure will be injected, not surface applied. Manure will be tested annually for nutrient content. Mortalities will be composted within 24 hours of death and stored under roof until the compost material can be land applied.

Enclosed is a nutrient management plan prepared by The Pinnacle Group on behalf of Trenton Farms RE, LLC.

**TRENTON FARMS RE, LLC**

**AMENDMENTS TO ORIGINAL 2015 NUTRIENT MANAGEMENT PLAN**

On July 17, 2015 Trenton Farms RE, LLC submitted a nutrient management plan to the Missouri Department of Natural Resources. Enclosed is a revised nutrient management plan with approximately 433.3 additional acres for manure application. Most of the additional acres are outside the floodplain. Fields added to the plan are identified as follows:

MO602524P4600

MO602525P1500B

MO602525P1500C

MO652003P4800B

MO652003P4800C

MO652003P4800D

MO652010P1000B

MO652010P1000C

MO652010P1000D

MO652010P1000E

MO652010P1200B

MO652010P1200C

MO652010P2100

MO652010P2500



200 0 200 Feet

Date: Apr 19, 2016  
Field Name: MO652003P4800B; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 11.46  
Field Boundary Start Location:  
Latitude: 40.45851735  
Longitude: -93.13100068



-  (10.4ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

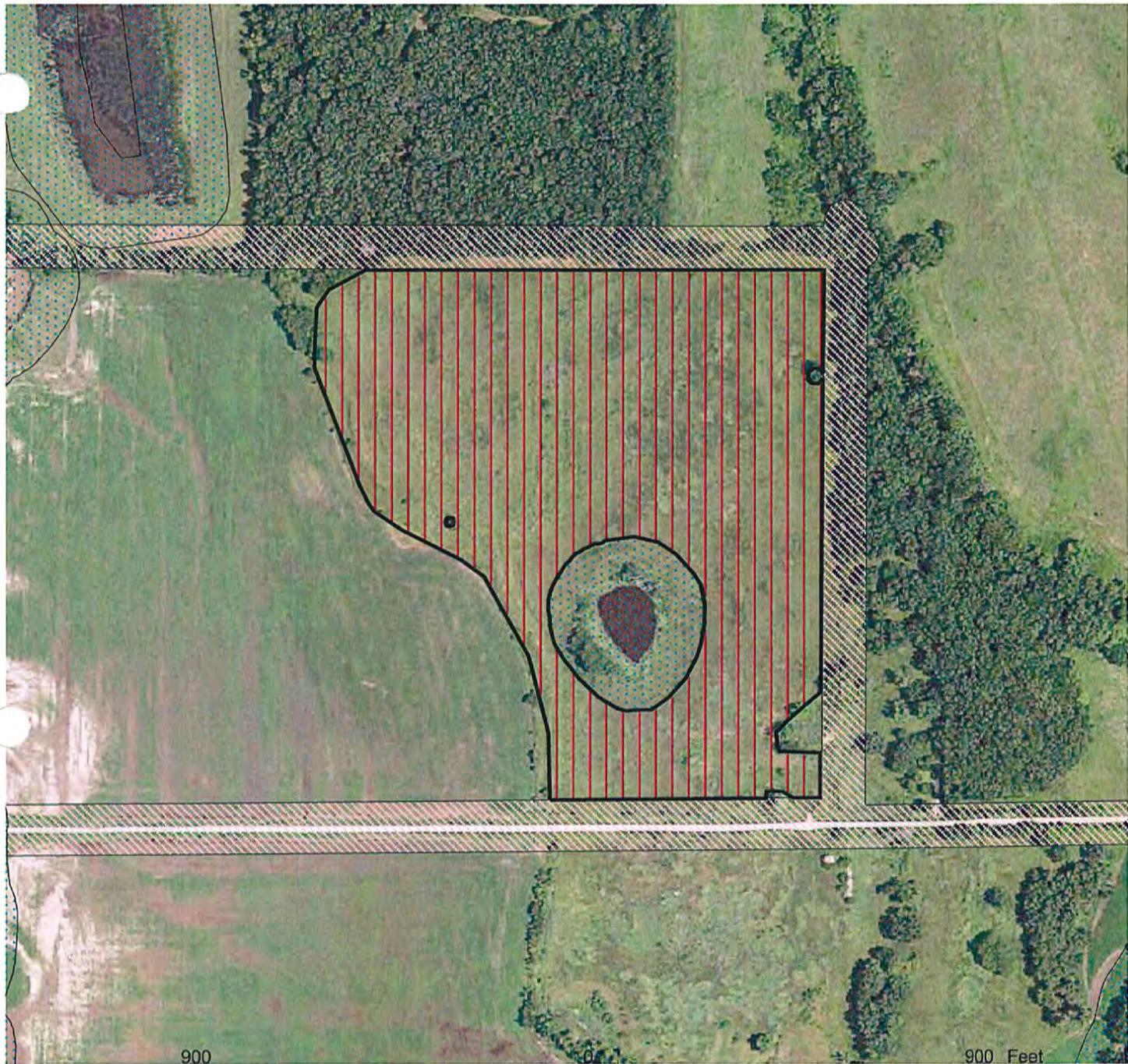
MO652003P4800C; 16 (28.62 ac.)



Date: Apr 19, 2016  
Field Name: MO652003P4800C; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 28.62  
Field Boundary Start Location:  
Latitude: 40.45853835  
Longitude: -93.12864094



-  (26.2ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer



Date: Apr 19, 2016  
Field Name: MO652003P4800D; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 26.09  
Field Boundary Start Location:  
Latitude: 40.45855258  
Longitude: -93.12401146



-  (22.3ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

MO652010P1000B; 16 (5.75 ac.)



Date: Apr 19, 2016  
Field Name: MO652010P1000B; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 5.75  
Field Boundary Start Location:  
Latitude: 40.45580324  
Longitude: -93.12126083



-  (4.1ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

MO652010P1000C; 16 (23.53 ac.)



Date: Apr 19, 2016  
Field Name: MO652010P1000C; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 23.53  
Field Boundary Start Location:  
Latitude: 40.45846078  
Longitude: -93.11817770



-  (17.6ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer



Date: Apr 19, 2016  
Field Name: MO652010P1000D; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 16.60  
Field Boundary Start Location:  
Latitude: 40.45064426  
Longitude: -93.11263230



-  (13.4ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

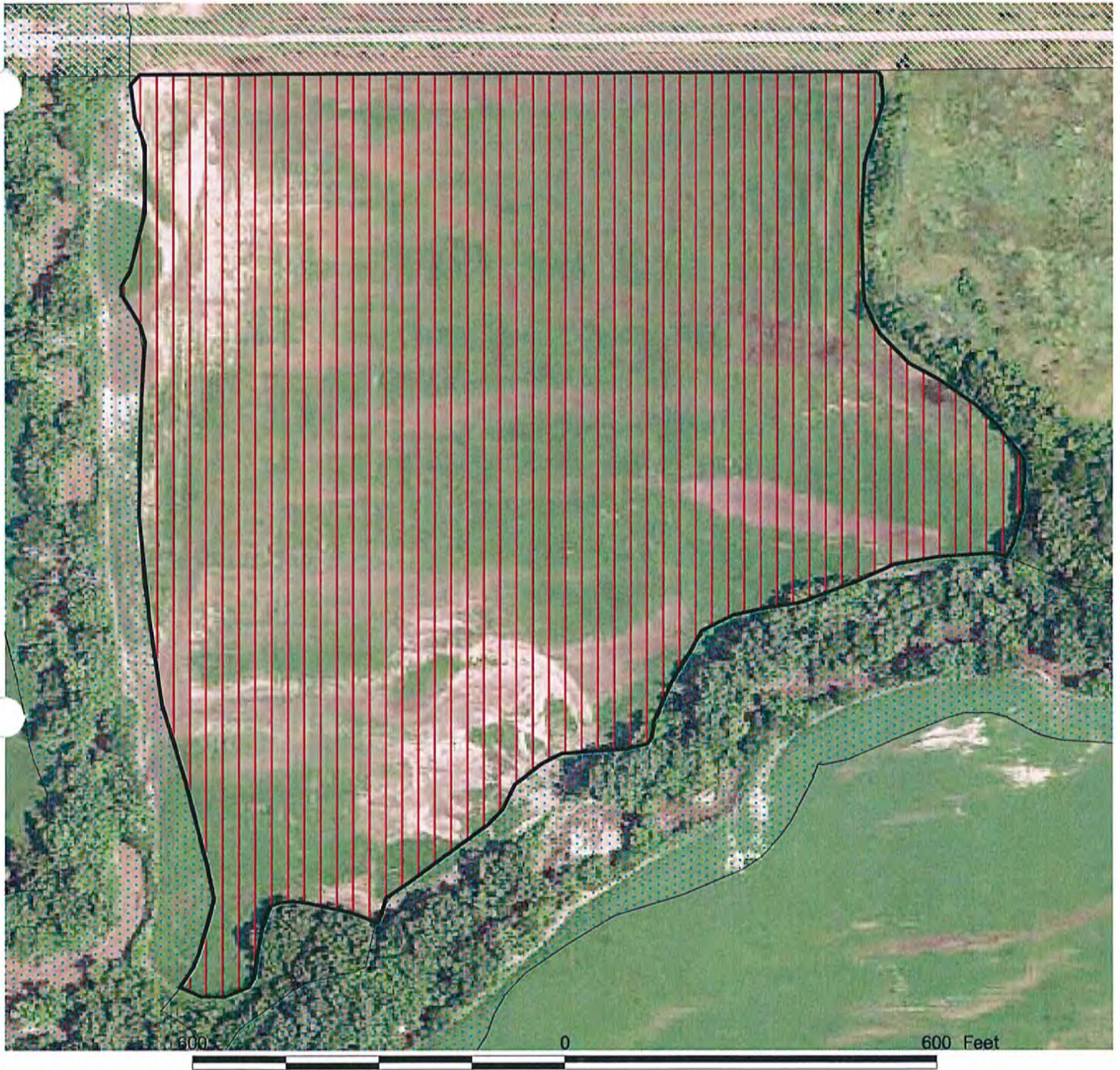


Date: Apr 19, 2016  
Field Name: MO652010P1000E; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 37.07  
Field Boundary Start Location:  
Latitude: 40.45848924  
Longitude: -93.11219462



-  (30.1ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

MO652010P1200B; 16 (35.76 ac.)



Date: Apr 19, 2016  
Field Name: MO652010P1200B; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 35.76  
Field Boundary Start Location:  
Latitude: 40.45834797  
Longitude: -93.12425526



-  (32.0ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

MO652010P1200C; 16 (18.74 ac.)



Date: Apr 19, 2016  
Field Name: MO652010P1200C; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 18.74  
Field Boundary Start Location:  
Latitude: 40.45377761  
Longitude: -93.12681334



-  (15.6ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

MO652010P2100; 16 (24.73 ac.)



Date: Apr 19, 2016  
Field Name: MO652010P2100; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 24.73  
Field Boundary Start Location:  
Latitude: 40.45821628  
Longitude: -93.12931265



- (22.2ac.) Field Boundary
- 100 ft Water Buffer
- 50 ft Property Line and Road Buffer



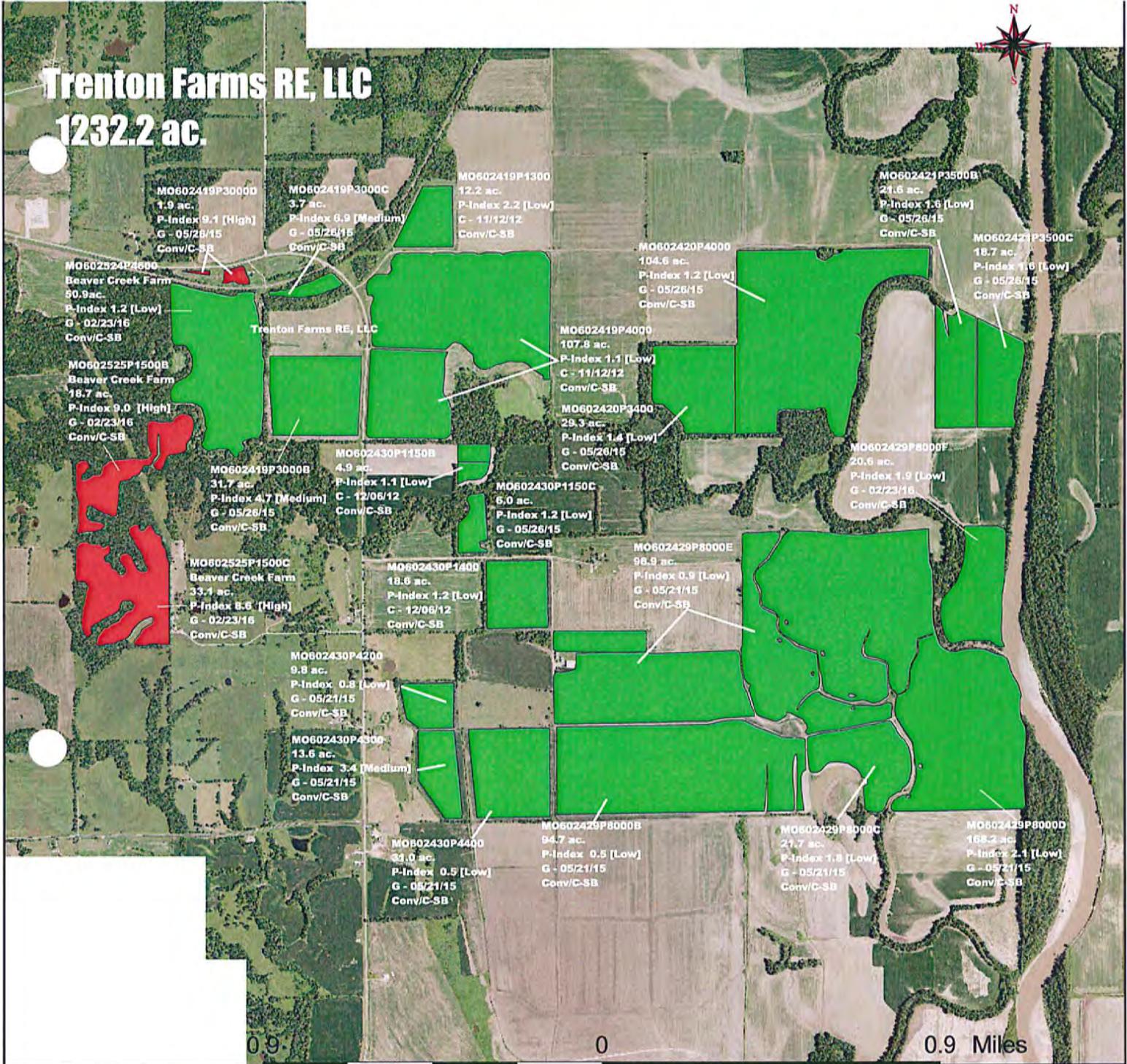
Date: Apr 19, 2016  
Field Name: MO652010P2500; 16  
Location: Putnam Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 121.70  
Field Boundary Start Location:  
Latitude: 40.45600834  
Longitude: -93.13295429



-  (116.1ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line and Road Buffer

# Trenton Farms RE, LLC

## 1232.2 ac.



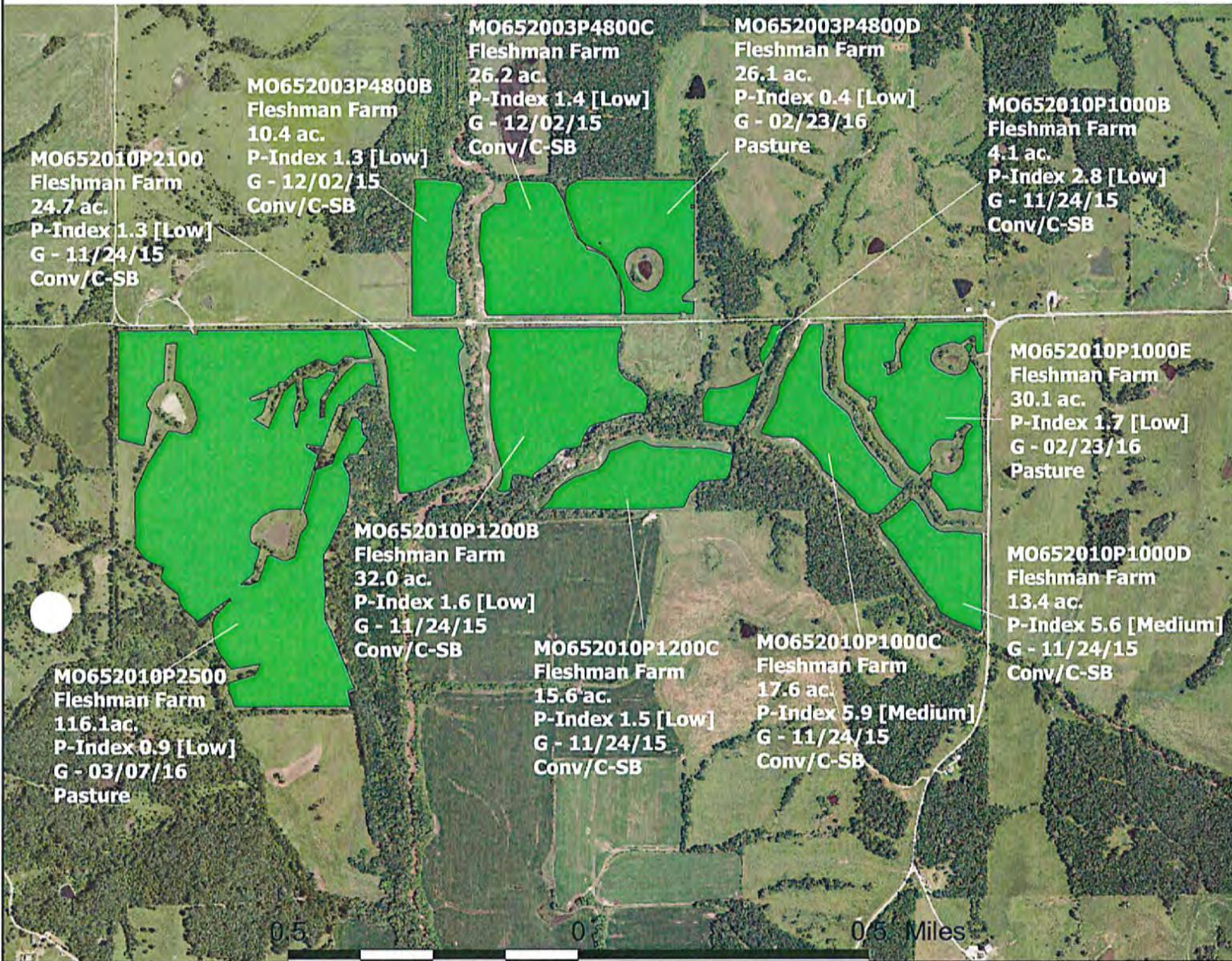
## Overview Map Grundy County

Farm Name: Trenton Farms RE, LLC  
 Location: Grundy County,  
 Missouri, United States  
 Client Name: Overview Map  
 Number of Fields: 34  
 Total Acres: 1232.2



Trenton Farms RE LLC; 15  
■ Nitrogen Rate Applied (1178.5 ac.)  
■ Phosphorus Rate (53.7 ac.)

**Trenton Farms RE, LLC**  
1232.2 ac.



**Overview Map**  
**Putnam County**



Farm Name: Trenton Farms RE, LLC  
Location: Putnam County,  
Missouri, United States  
Client Name: Overview Map  
Number of Fields: 34  
Total Acres: 1232.2

Trenton Farms RE LLC; 15  
 Nitrogen Rate Ap (1178.5 ac.)  
 Phosphorus Rate (53.7ac.)



\$5 to \$7. Sales girls were paid \$13 a month. One shop worked its bakers only 8 hours a day; others 10 to 11 hours. Brick, tiling - the manager was paid \$75 a month. He took care of the office work. Brick setters were paid from \$10 to \$15 a week; clay miners, \$10 to \$12; brick pitchers, \$10; brick graders, \$12; helpers, \$6; teamsters, \$10; truckers, \$10. The time was 10 hours a day. Canning-Managers and superintendents drew \$54 each a month. Cappers were paid \$9 a week and cooks and processors from \$7 to \$9; laborers, \$5; and boy helpers, \$3 to \$4. Females, forewomen, \$10 a week; peelers, \$6 to \$9; helpers, \$3 to \$4. Time, ten hours a day.

Source: History of Grundy County, News Publishing Company 1908

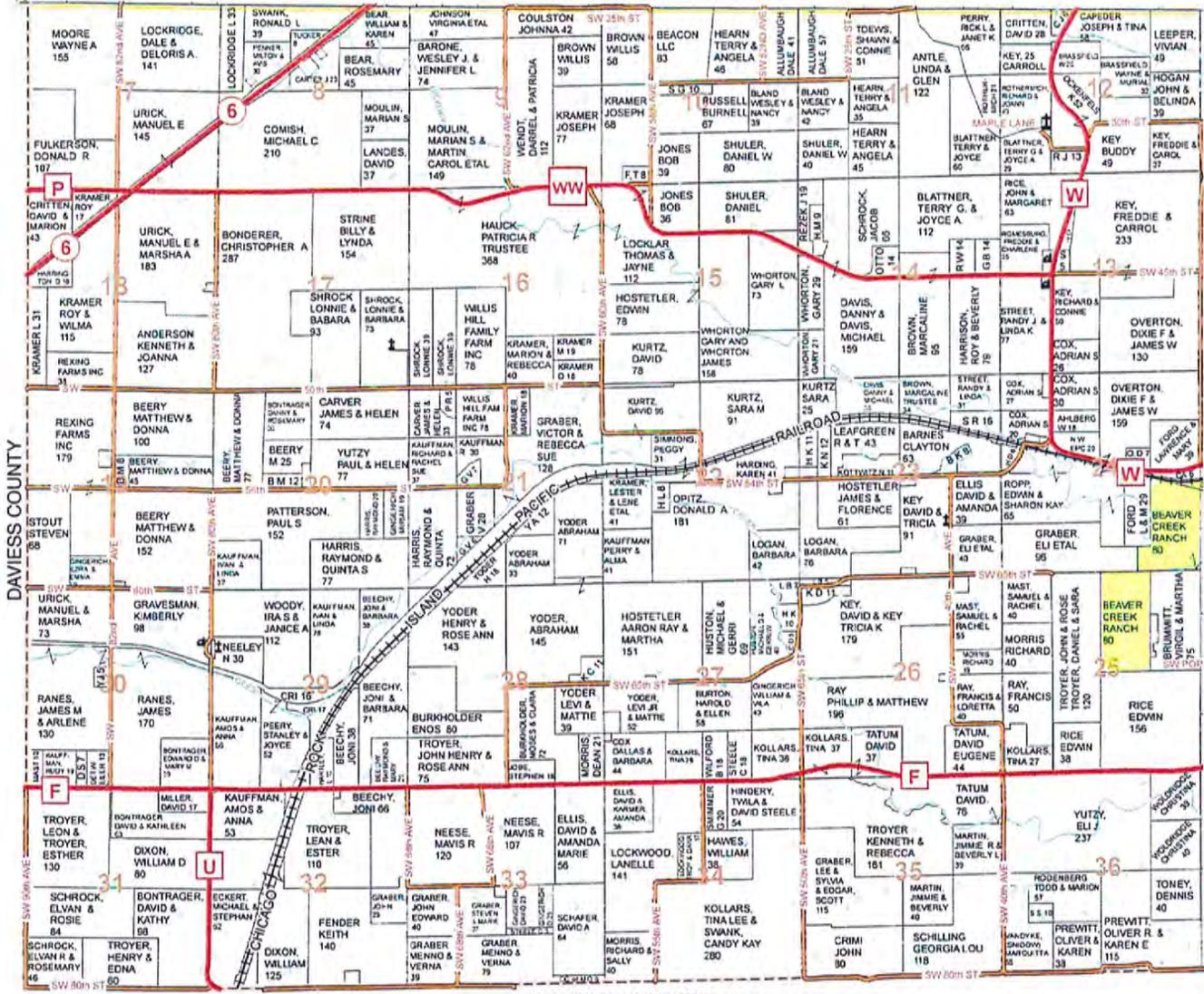


## Jefferson (W)

## Township 60N - Range 25W

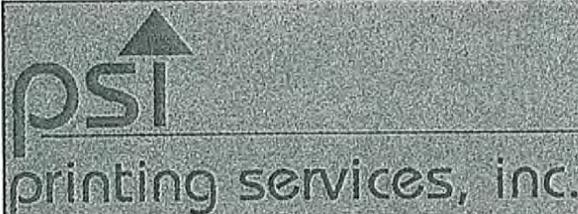
Copyright © 2014 Mapping Solutions

SEE PAGE 27



SEE PAGE 37

LIVINGSTON COUNTY



- ▲ Commercial & Quick Printing
- ▲ Office Supplies & Furniture
- ▲ High Speed Copies
- ▲ Advertising Specialties

www.printingservicesinc.net

▲ belmond  
iowa 50421

524 river ave. north, p.o. box 263  
641-444-3955 • 800-477-9260  
fax 641-444-5100

▲ mason city  
iowa 50401  
1915 4th st. sw  
641-424-3538 • 800-317-3538  
fax 641-421-0481

▲ webster city  
iowa 50595  
633 2nd st.  
515-832-1744 • 800-728-1744  
fax 515-832-2118

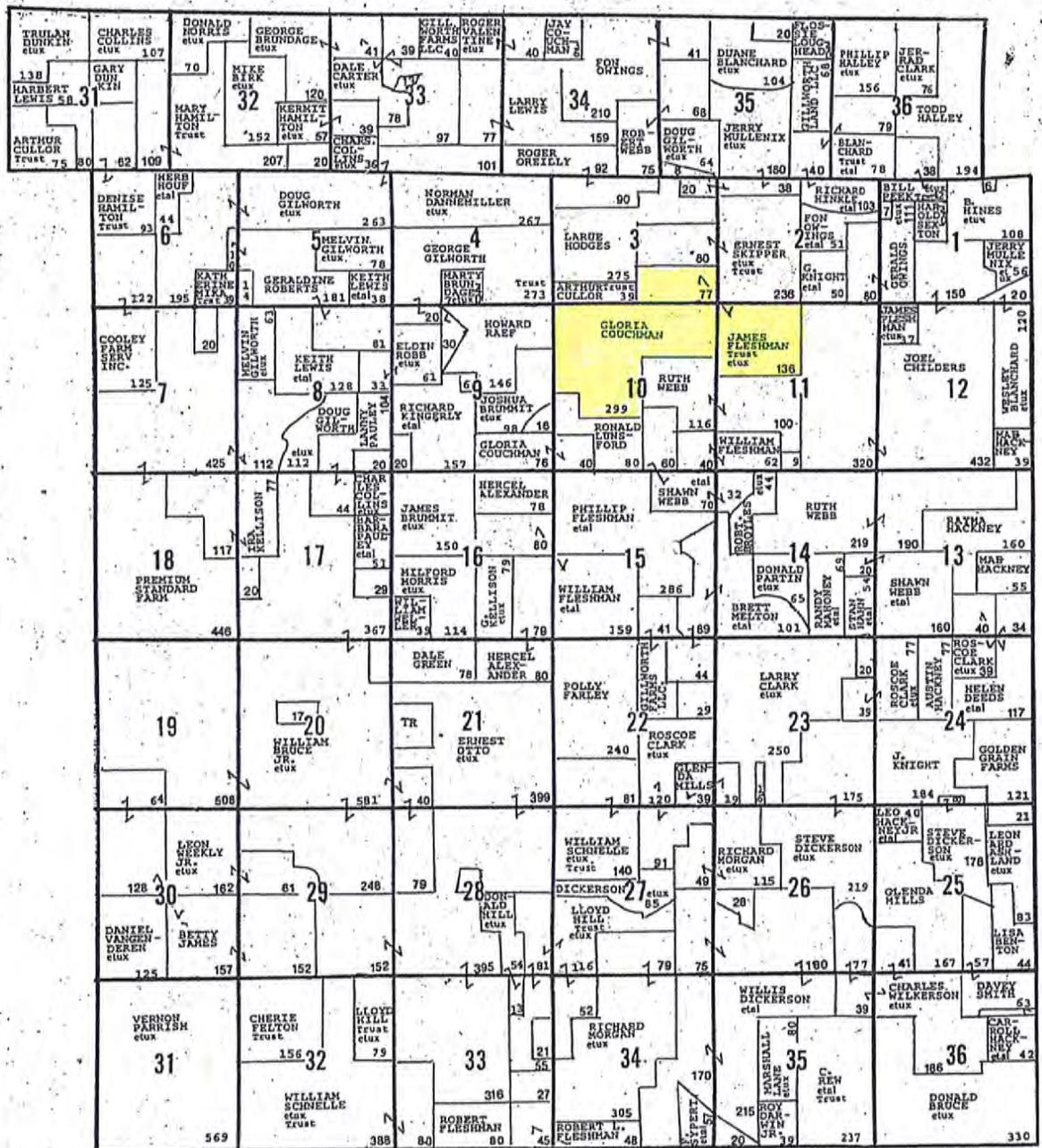
▲ eldora  
iowa 50627  
1320 edgington ave.  
641-939-3444 • 800-947-5481  
fax 641-939-2526

▲ nevada  
iowa 50201  
1136 6th st.  
515-382-1804 • 866-207-1804  
fax 515-382-1545

T-65-66-N

JACKSON PLAT  
(Landowners)

R-20-W



**Manure Management Plan Form  
Animal Feeding Operation Information**

Name of operation: Trenton Farms RE, LLC Permit No. N/A

Location of the operation: SW State Hwy W  
(911 address)  
Trenton MO 64683  
(Town) (State) (Zip)  
NW 1/4 of the SW 1/4 of Sec 19 T 60N R 24W Grundy  
(1/4 1/4) (1/4) (Section) (Tier & Range) (Township Name) (County)

**Owner and contacts of the animal feeding operation:**

Owner Trenton Farms RE, LLC Phone 507-825-7032  
 Address 1300 S. Hwy 75, Pipestone, MN 56164

Contact person (if different than owner) Brian Ritland Phone 641-648-7300  
 Address 620 Country Club Rd Iowa Falls, IA 50126  
 E-mail address (optional) britland@pinnacleiowa.com Cell phone (optional) \_\_\_\_\_

Contract company (if applicable) \_\_\_\_\_ Phone \_\_\_\_\_  
 Address \_\_\_\_\_

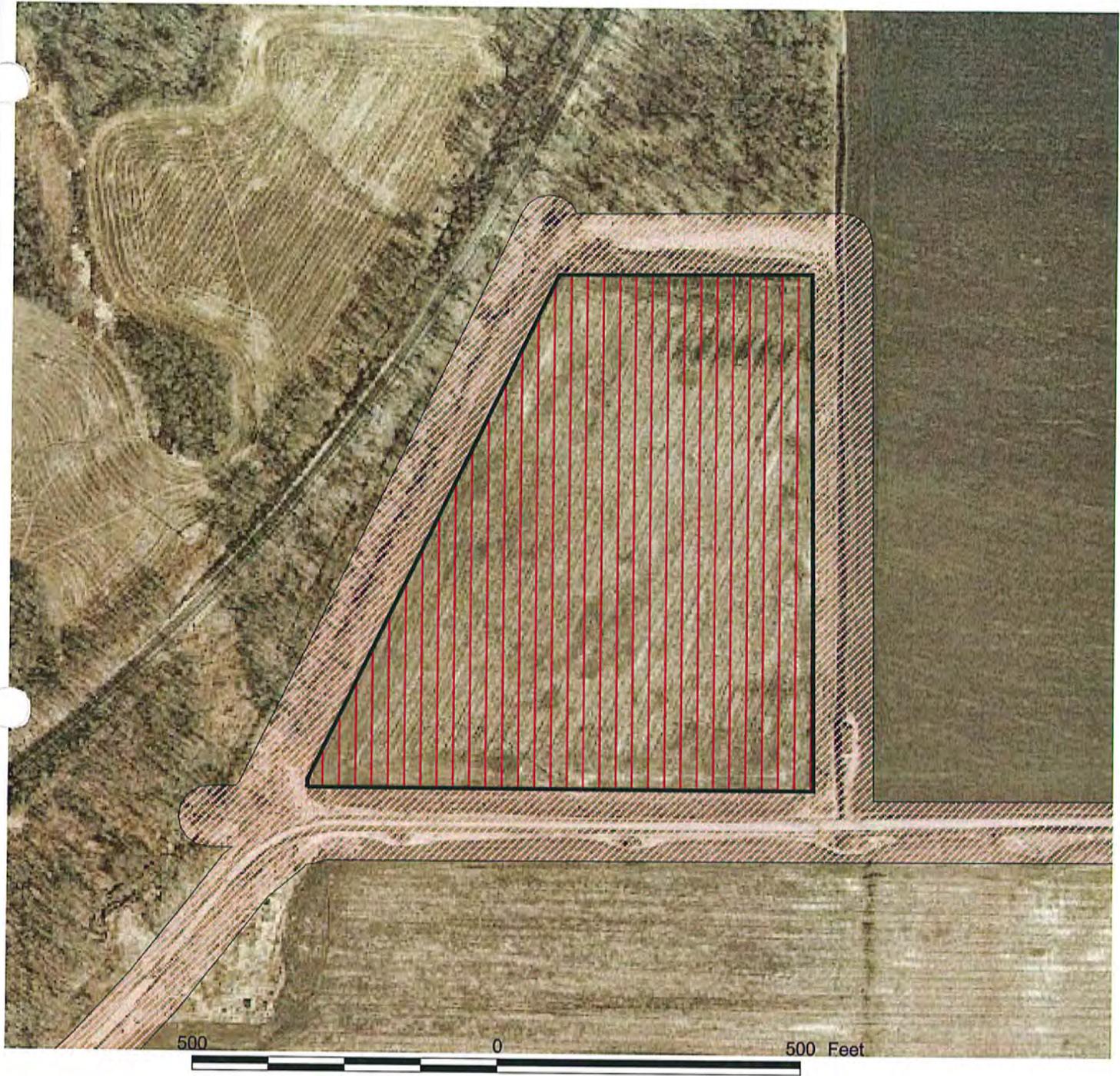
**Table 1. Information about livestock production and manure management system**

1	2	3	4	5	6	7	8
Animal type/ Production phase <sup>a</sup>	Max # of animals confined	Manure Storage Structure <sup>b</sup>	N <sup>c</sup>	P <sub>2</sub> O <sub>5</sub> <sup>c</sup>	gal/space/dy <sup>d</sup>	Days/yr Facility occupied	Annual Manure Produced <sup>e</sup>
Gestation	4480	Below Building Pit	25	25	3.0	365	2,448,373
Farrow-Nursery	936	Below Building Pit	15	12	2.2	365	1,238,774
Grow/finish (wet/dry)	1280	GDU Below Building Pit	50	42	0.9	365	530,368
						<b>Total Gallons</b>	<b>4,217,515</b>

Animal Unit Capacity 2582.4

Source of Manure Nutrient Content Data \_\_\_\_\_

MO602419P1300; 15 (14.37 ac.)



Date: Mar 13, 2015  
Field Name: MO602419P1300; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 14.37  
Field Boundary Start Location:  
Latitude: 39.99883201  
Longitude: -93.64171449



 (12.2ac.) Field Boundary  
 50 ft Property Line Road Buffer

MO602419P3000B; 15 (34.04 ac.)



Date: Jun 2, 2015  
Field Name: MO602419P3000B; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 34.04  
Field Boundary Start Location:  
Latitude: 39.99473320  
Longitude: -93.64783230



-  (31.7ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line/Road Buffer

MO602419P3000C; 15 (3.85 ac.)



400 0 400 Feet

Date: Jun 3, 2015  
Field Name: MO602419P3000C; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 3.85  
Field Boundary Start Location:  
Latitude: 39.99751968  
Longitude: -93.64705688



-  (3.7ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line/Road Buffer



300 0 300 Feet

Date: Jun 3, 2015  
Field Name: MO602419P3000D; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 3.70  
Field Boundary Start Location:  
Latitude: 39.99745562  
Longitude: -93.65179010



-  (1.9ac.) Field Boundary
-  50 ft Road Buffer
-  100 ft Water Buffer

MO602419P4000; 15 (107.78 ac.)



Date: Apr 20, 2016  
Field Name: MO602419P4000; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 107.78  
Field Boundary Start Location:  
Latitude: 39.99497472  
Longitude: -93.64568934



-  100 ft Water Buffer
-  (107.8ac.) Field Boundary
-  50 ft Property Line Road Buffer

MO602420P3400; 15 (30.89 ac.)

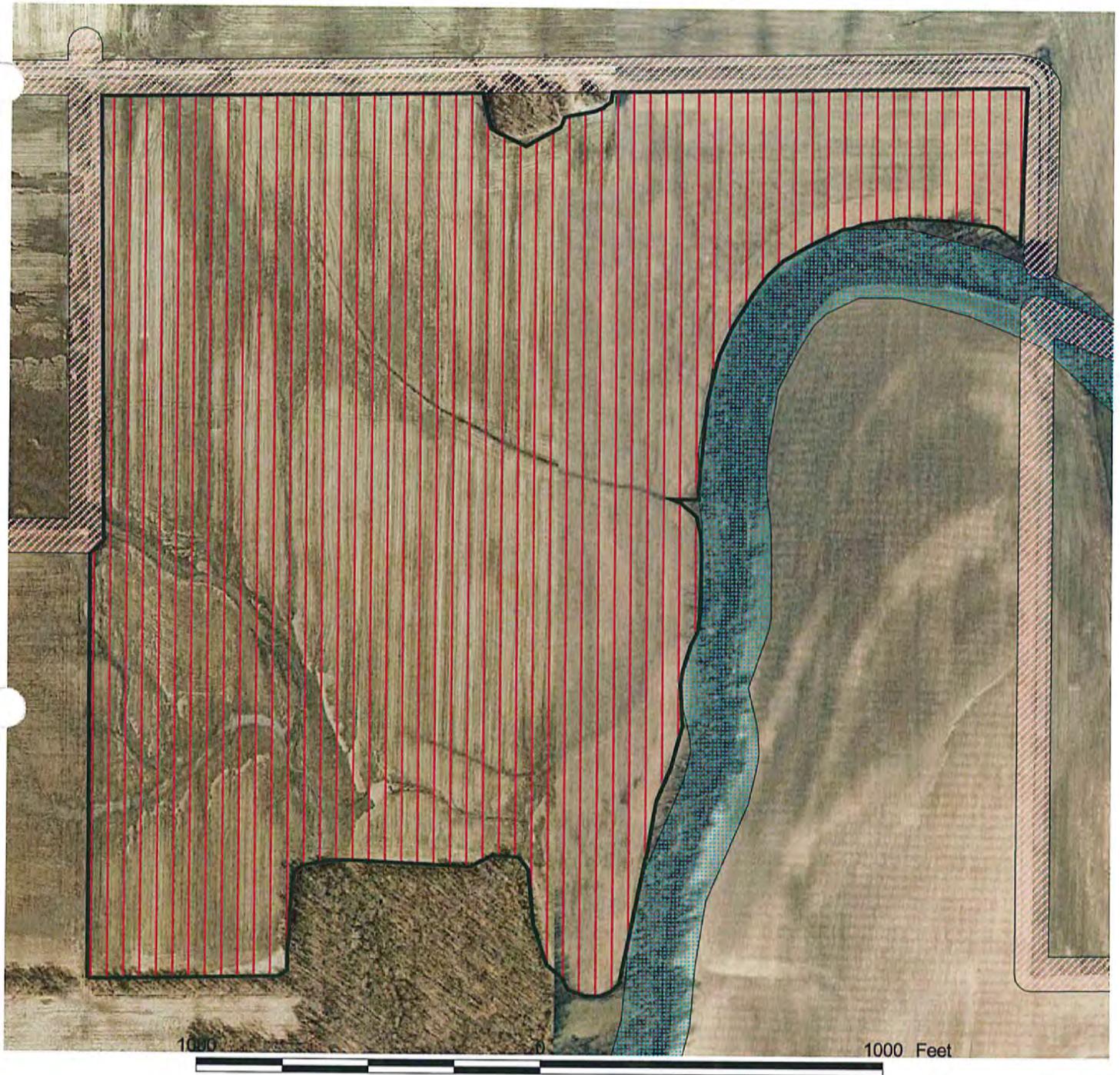


Date: Mar 27, 2015  
Field Name: MO602420P3400; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 30.89  
Field Boundary Start Location:  
Latitude: 39.99184468  
Longitude: -93.62743864



-  (29.3ac.) Field Boundary
-  50 ft Property Line Road Buffer
-  100 ft Water Buffer

MO602420P4000; 15 (108.82 ac.)

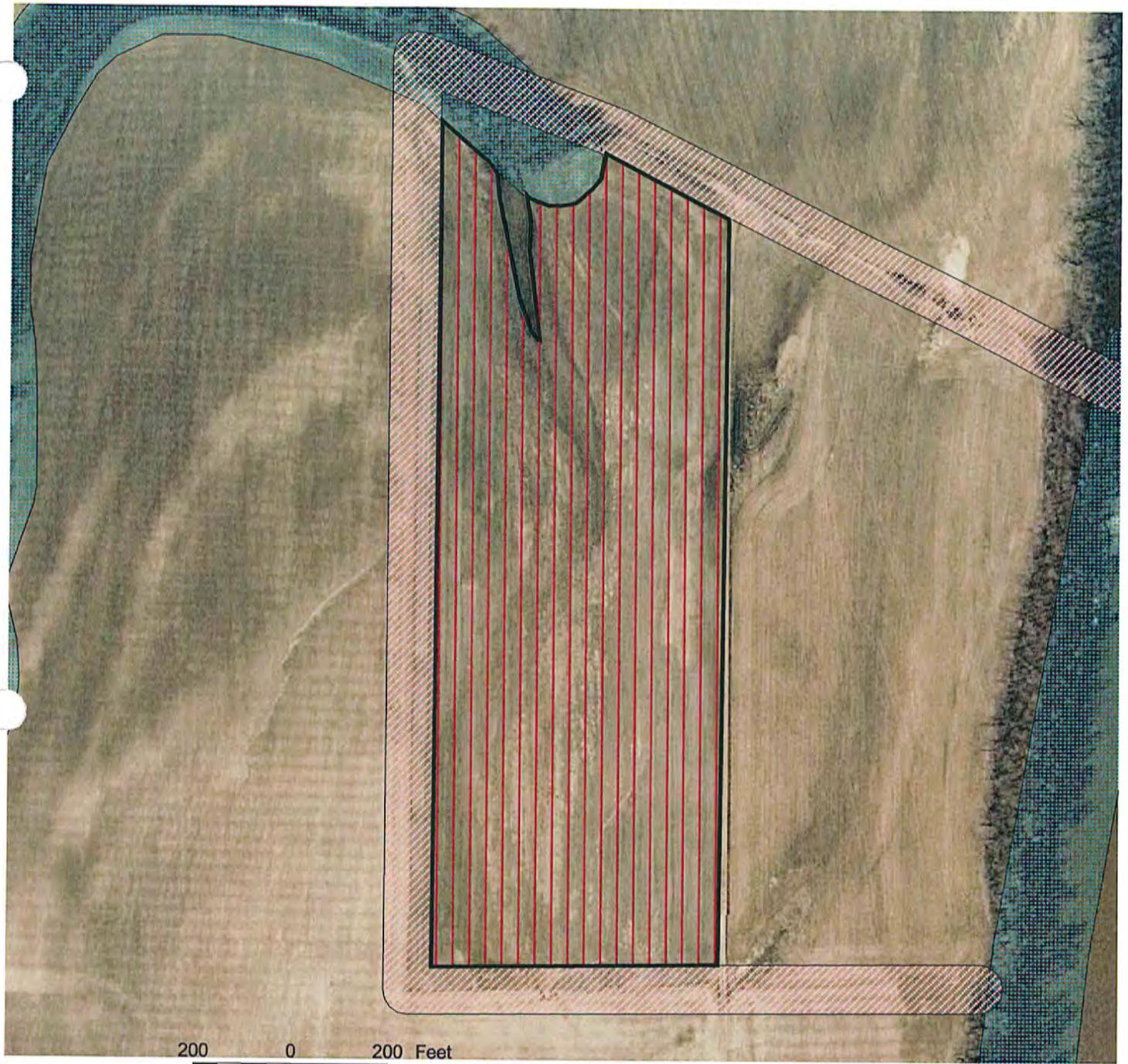


Date: Mar 27, 2015  
Field Name: MO602420P4000; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 108.82  
Field Boundary Start Location:  
Latitude: 39.99183956  
Longitude: -93.62742110



-  (104.6ac.) Field Boundary
-  50 ft Property Line Road Buffer
-  100 ft Water Buffer

MO602421P3500B; 15 (25.17 ac.)



Date: Mar 27, 2015  
Field Name: MO602421P3500B; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 25.17  
Field Boundary Start Location:  
Latitude: 39.99199832  
Longitude: -93.61531524



-  (21.6ac.) Field Boundary
-  50 ft Property Line Road Buffer
-  100 ft Water Buffer

MO602421P3500C; 15 (19.83 ac.)



Date: Mar 27, 2015  
Field Name: MO602421P3500C; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 19.83  
Field Boundary Start Location:  
Latitude: 39.99200571  
Longitude: -93.61522544



-  (18.7ac.) Field Boundary
-  50 ft Property Line/Road Buffer
-  100 ft Water Buffer

MO602429P8000B; 15 (98.70 ac.)



Date: Mar 27, 2015  
Field Name: MO602429P8000B; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 98.70  
Field Boundary Start Location:  
Latitude: 39.98054447  
Longitude: -93.63628233



- (94.7ac.) Field Boundary
- 50 ft Property Line Road Buffer
- 100 ft Water Buffer

MO602429P8000C; 15 (24.07 ac.)



Date: Mar 27, 2015  
Field Name: MO602429P8000C; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 24.07  
Field Boundary Start Location:  
Latitude: 39.98016906  
Longitude: -93.62372197



-  (21.7ac.) Field Boundary
-  50 ft Property Line Road Buffer
-  100 ft Water Buffer

MO602429P8000D; 15 (186.07 ac.)



Date: Jun 3, 2015  
Field Name: MO602429P8000D; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 186.07  
Field Boundary Start Location:  
Latitude: 39.98454375  
Longitude: -93.62518915



-  (168.2ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line Road Buffer



Date: Jun 3, 2015  
Field Name: MO602429P8000E; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 111.42  
Field Boundary Start Location:  
Latitude: 39.98346514  
Longitude: -93.63180642



-  (98.9ac.) Field Boundary
-  50 ft Property Line and Road Buffer
-  100 ft Water Buffer
-  100 ft Water Buffer

MO602430P1150B; 15 (5.97 ac.)



Date: Mar 27, 2015  
Field Name: MO602430P1150B; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 5.97  
Field Boundary Start Location:  
Latitude: 39.99137845  
Longitude: -93.64136127



-  (4.9ac.) Field Boundary
-  50 ft Property Line Road Buffer
-  100 ft Water Buffer

MO602430P1150C; 15 (6.92 ac.)

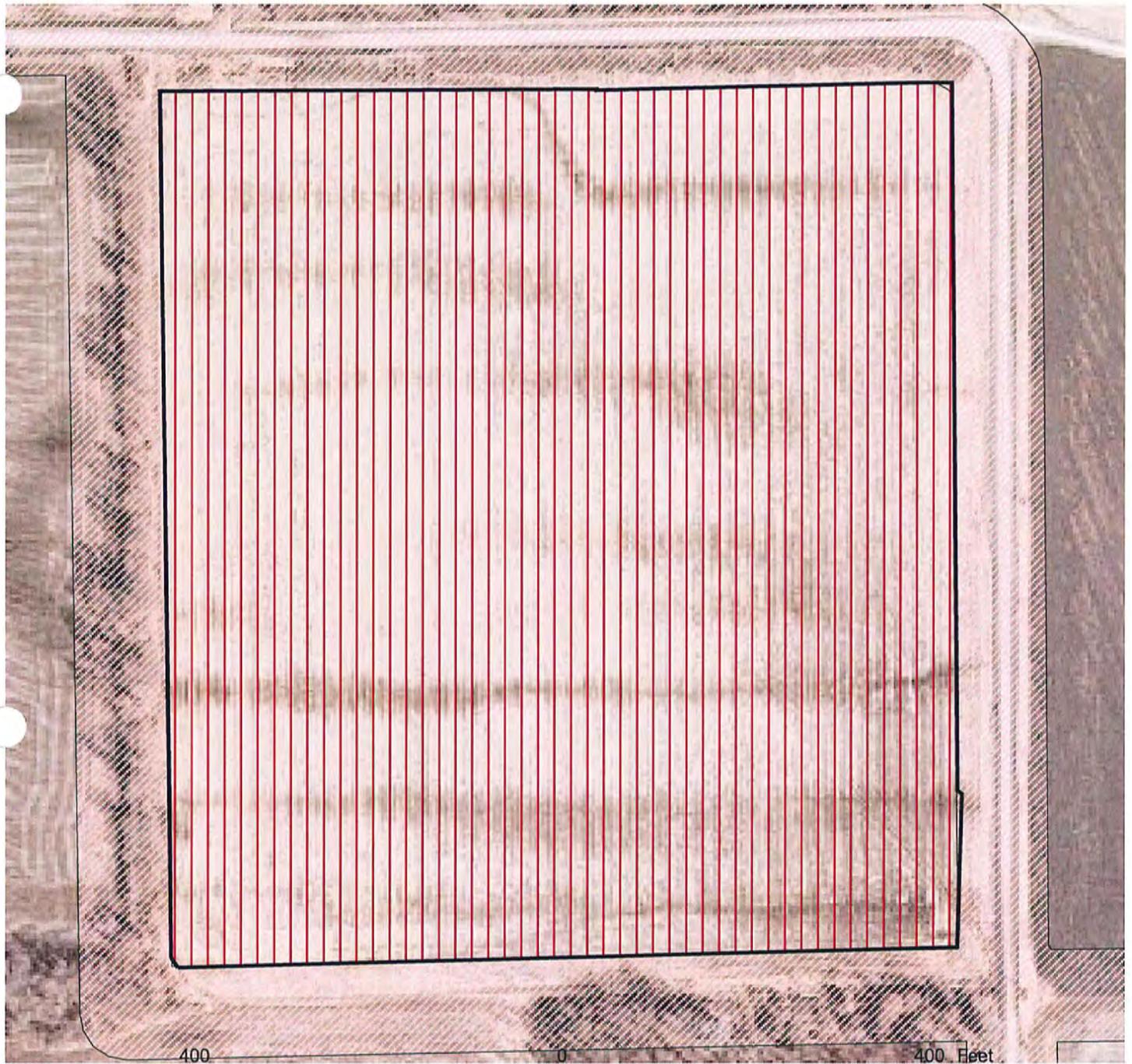


Date: Mar 27, 2015  
Field Name: MO602430P1150C; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 6.92  
Field Boundary Start Location:  
Latitude: 39.98712251  
Longitude: -93.63980063



-  (6.0ac.) Field Boundary
-  50 ft Property Line Road Buffer
-  100 ft Water Buffer

MO602430P1400; 15 (21.02 ac.)



Date: Apr 20, 2016  
Field Name: MO602430P1400; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 21.02  
Field Boundary Start Location:  
Latitude: 39.98428175  
Longitude: -93.63663616



-  (18.6ac.) Field Boundary
-  50 ft Property Line/Road Buffer
-  100 ft Water Buffer

MO602430P4200; 15 (11.30 ac.)



Date: Apr 20, 2016  
Field Name: MO602430P4200; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 11.30  
Field Boundary Start Location:  
Latitude: 39.98227690  
Longitude: -93.64349101



-  (9.8ac.) Field Boundary
-  50 ft Property Line and Road Buffer
-  100 ft Water Buffer

MO602430P4300; 15 (17.01 ac.)



Date: Apr 20, 2016  
Field Name: MO602430P4300; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 17.01  
Field Boundary Start Location:  
Latitude: 39.97714198  
Longitude: -93.64070069



-  (13.6ac.) Field Boundary
-  50 ft Property Line and Road Buffer
-  100 ft Water Buffer

MO602430P4400; 15 (35.57 ac.)



Date: Jun 3, 2015  
Field Name: MO602430P4400; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 35.57  
Field Boundary Start Location:  
Latitude: 39.97721737  
Longitude: -93.63645133



-  (31.0ac.) Field Boundary
-  1000 ft Residence Buffer
-  50 ft Property Line and Road Buffer
-  100 ft Water Buffer

MO602524P4600; 15 (53.71 ac.)



Date: Apr 1, 2016  
Field Name: MO602524P4600; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 53.71  
Field Boundary Start Location:  
Latitude: 39.99152588  
Longitude: -93.65130007



-  (50.9ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line Buffer

MO602525P1500B; 15 (19.48 ac.)



Date: Apr 1, 2016  
Field Name: MO602525P1500B; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 19.48  
Field Boundary Start Location:  
Latitude: 39.98785666  
Longitude: -93.66028945



-  (18.7ac.) Field Boundary
-  100 ft Water Buffer
-  50 ft Property Line Buffer

MO602525P1500C; 15 (34.84 ac.)



Date: Apr 1, 2016  
Field Name: MO602525P1500C; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 34.84  
Field Boundary Start Location:  
Latitude: 39.98364549  
Longitude: -93.65565309



 (33.1ac.) Field Boundary  
 50 ft Property Line Buffer

# Missouri Comprehensive Nutrient Management Plan FARMER PLAN DOCUMENT

**Operation Name: Trenton Farms RE, LLC**

This plan is a summary of the key activities for one year of the nutrient management plan. The period of time covered by this plan is:  
**8/2017 - 7/2018**

The objective of this document is to provide a concise list of the nutrient management activities on this operation for the year indicated. Activities covered by this plan include:

- Planned manure transfers and sales.
- Planned manure application dates and rates.
- Planned fertilizer application dates and rates.

Record keeping is an important part of nutrient management. Please use the space in this plan to record what actually occurred on each field.

**Farm contact information:** Trenton Farms RE, LLC  
SW State Highway W  
Trenton, MO 64683  
507-825-7032 (office)

**Whole Plan Period:** August 2017 - July 2022

# Contents

Manure Transfers ( Table A ) .....	3
Planned Manure Applications ( Table B ) .....	4
Manure Application Records .....	6
Planned Commercial Fertilizer Applications ( Table C ) .....	7
Commercial Fertilizer Application Records .....	8
Recommended Manure Management Practices ( Table D ) .....	9
Field by Field Recommendations ( Table E ) .....	10
Summary ( Tables F and G ).....	45
- Manure Summary	
- Land Applied Nutrient Summary	
Lime Recommendations ( Table H ) .....	46
Crop Record Keeping ( Table I ).....	48

**A. Manure Transfers - 8/2017 - 7/2018**

Exports off the Farm: (blank rows are for recording exports as they occur)

Export Month	Export Year	Source of Manure	Target Export Amount	Units	Receiving Operation	Notes

Imports onto the Farm: (blank rows are for recording imports as they occur)

Import Month	Import Year	Source of Manure	Animal Type	Target Import Amount	Units	Notes

Internal Transfers of Manure: (blank rows are for recording transfers as they occur)

Transfer Month	Transfer Year	Source of Manure	Manure Destination	Target Transfer Amount	Units	Notes

**B. Planned Manure Applications - 8/2017 - 7/2018**

Month and Year	Field ID	Field SubID	Planned Crop(s)	Source	Application Equipment	Acres Covered	Application Rate	Units per acre	Total Applied
Oct 2017	MO602419P 1300		Corn grain	Gestation	Applicator	12.2	6,100	Gal	74,420
Oct 2017	MO602419P 3000B		Corn grain	GDU	Applicator	31.7	3,400	Gal	107,780
Oct 2017	MO602419P 4000		Corn grain	Gestation	Applicator	107.8	6,100	Gal	657,580
Oct 2017	MO602420P 3400		Corn grain	Gestation	Applicator	29.3	7,900	Gal	231,470
Oct 2017	MO602430P 1150B		Corn grain	Gestation	Applicator	4.9	6,100	Gal	29,890
Oct 2017	MO602430P 1150C		Corn grain	Gestation	Applicator	5.8	7,900	Gal	46,140
Oct 2017	MO602430P 1400		Corn grain	GDU	Applicator	18.6	2,600	Gal	48,360
Nov 2017	MO602430P 1150C		Corn grain	Gestation	Applicator	0.2	7,900	Gal	1,580
Mar 2018	MO602419P 3000C		Corn grain	GDU	Applicator	3.7	3,300	Gal	12,210
Mar 2018	MO602421P 3500B		Corn grain	GDU	Applicator	21.6	3,400	Gal	73,440
Mar 2018	MO602421P 3500C		Corn grain	GDU	Applicator	18.7	3,300	Gal	61,710
Mar 2018	MO602429P 8000B		Corn grain	Gestation	Applicator	94.7	8,200	Gal	776,540
Mar 2018	MO602430P 4400		Corn grain	Gestation	Applicator	31.0	7,600	Gal	235,600
Jul 2018	MO652003P 4800D		Cool season grass pasture	Gestation	Applicator	22.3	5,800	Gal	129,340

Manure Application Records - 8/2017 - 7/2018

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
1									
2									
3									
4									
5									
6									
7									

Manure Application Records - 8/2017 - 7/2018 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
1										
2										
3										
4										
5										
6										
7										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

Manure Application Records - 8/2017 - 7/2018

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
8									
9									
10									
11									
12									
13									
14									

Manure Application Records - 8/2017 - 7/2018 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
8										
9										
10										
11										
12										
13										
14										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

**C. Planned Commercial Fertilizer Applications - 8/2017 - 7/2018**

No planned commercial fertilizer applications for the period.



### D. Recommended Manure Management Practices

Every time you apply manure you should review the following checklist to be sure conditions are favorable for manure applications. **These practices are required on permitted operations and operations that receive cost-share support through EQIP.**

- Know the proper manure source and application rate for each field.
- Keep good records, write down such things as operations performed, dates and times, actual rates, and weather conditions. This document provides record keeping forms.
- No surface application of manure if precipitation, likely to create runoff, is forecasted to occur within 24 hours of the planned application.
- No manure application on land with a slope greater than 20 percent.
- No surface application of manure to frozen, snow-covered or saturated soils.
- Manure applications shall comply with all manure application setbacks defined in the table below:

Manure application setback distances where manure should not be applied. For streams, lakes and wetlands the setback distance is measured from the defined edge of the water feature.

Setback Feature	Application Conditions	Setback Distance (feet)
Public or private drinking water well, drinking water lake or impoundment, or drinking water intake structure.	All applications	300
Other wells including un-plugged abandon wells	All applications	300
Public and privately owned lakes and impoundments not used as a water supply including impoundments with no outlet. Perennial streams, intermittent streams, canals, drainage ditches and wetlands. Tile line inlet (un-plugged during application).	Permanently vegetated setback	35
	Up-gradient, no or insufficient vegetated setback	100
	Down-gradient, no or insufficient vegetated setback	35
Losing streams, cave entrance, spring, or active sinkhole.	All applications	300
Non-owned occupied residence.	All applications	150
Public use area including non-owned businesses.	All applications	150
Public roads and property boundaries.	All applications	50

**The following practices are recommended:**

- Apply nutrients close to crop use to maximize nutrient uptake and reduce potential losses.
- Calibrate and maintain application equipment to apply accurate and uniform rates; all land application equipment should be calibrated at least annually.
- Avoid application when wind is blowing in the direction of neighbors or on weekends and holidays when people are more likely to be outdoors.

**For liquid applications:**

- Adjusting surface application rates to meet infiltration rate and water holding capacity of the soil.
- Irrigation systems should have automatic shut-off devices in case of pressure loss and/or an operator on-site at all times during operation to monitor application equipment.
- The perimeter of all fields receiving manure should be checked regularly during operation of land application equipment to confirm manure is not running off the field or entering waters of the state.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P1300**

**Field Information**

Total Acres:	14.4	Spreadable Acres:	12.2
Non-Spreadable Acres:	2.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	75	80

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2017			
Manure Source	Gestation			
Application Rate	6,100 gal/a			
Acres Covered	12.2			
Total Applied	74,420 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	101			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	153			
K <sub>2</sub> O (lbs/acre)	248			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P4000**

**Field Information**

Total Acres:	112.2	Spreadable Acres:	107.8
Non-Spreadable Acres:	4.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	75	80

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1		
Application Time	Oct 2017		
Manure Source	Gestation		
Application Rate	6,100 gal/a		
Acres Covered	107.8		
Total Applied	657,580 gal		
Loads per Field	0.0		
Placement	Injected		
N (lbs/acre)	101		
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	153		
K <sub>2</sub> O (lbs/acre)	248		

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602420P3400

Field Information

Total Acres:	30.9	Spreadable Acres:	29.3
Non-Spreadable Acres:	1.6	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	70	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2017			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	29.3			
Total Applied	231,470 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602420P4000

**Field Information**

Total Acres:	108.8	Spreadable Acres:	104.6
Non-Spreadable Acres:	4.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	70	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602421P3500B**

**Field Information**

Total Acres:	25.2	Spreadable Acres:	21.6
Non-Spreadable Acres:	3.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	80	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Mar 2018			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	21.6			
Total Applied	73,440 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602421P3500C**

**Field Information**

Total Acres:	19.8	Spreadable Acres:	18.7
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	0	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Mar 2018			
Manure Source	GDU			
Application Rate	3,300 gal/a			
Acres Covered	18.7			
Total Applied	61,710 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	127			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	139			
K <sub>2</sub> O (lbs/acre)	83			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000B**

**Field Information**

Total Acres:	98.7	Spreadable Acres:	94.7
Non-Spreadable Acres:	4.0	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	115	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
<b>Application Time</b>	Mar 2018			
<b>Manure Source</b>	Gestation			
<b>Application Rate</b>	8,200 gal/a			
<b>Acres Covered</b>	94.7			
<b>Total Applied</b>	776,540 gal			
<b>Loads per Field</b>	0.0			
<b>Placement</b>	Injected			
<b>N (lbs/acre)</b>	135			
<b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b>	205			
<b>K<sub>2</sub>O (lbs/acre)</b>	333			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000C

Field Information

Total Acres:	24.1	Spreadable Acres:	21.7
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	75	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

Field Information

Total Acres:	186.1	Spreadable Acres:	168.2
Non-Spreadable Acres:	17.9	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150B

Field Information

Total Acres:	6.0	Spreadable Acres:	4.9
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	80	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2017			
Manure Source	Gestation			
Application Rate	6,100 gal/a			
Acres Covered	4.9			
Total Applied	29,890 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	101			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	153			
K <sub>2</sub> O (lbs/acre)	248			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150C

Field Information

Total Acres:	6.9	Spreadable Acres:	6.0
Non-Spreadable Acres:	0.9	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	75	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1	Application 2		
Application Time	Oct 2017	Nov 2017		
Manure Source	Gestation	Gestation		
Application Rate	7,900 gal/a	7,900 gal/a		
Acres Covered	5.8	0.2		
Total Applied	46,140 gal	1,580 gal		
Loads per Field	0.0	0.0		
Placement	Injected	Injected		
N (lbs/acres)	130	130		
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198	198		
K <sub>2</sub> O (lbs/acre)	321	321		

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

Total Acres:	21.0	Spreadable Acres:	18.6
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	80	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2017			
Manure Source	GDU			
Application Rate	2,600 gal/a			
Acres Covered	18.6			
Total Applied	48,360 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	100			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	109			
K <sub>2</sub> O (lbs/acre)	65			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

Total Acres:	0.0	Spreadable Acres:	
Non-Spreadable Acres:		Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
------	------------	---	-------------------------------	------------------

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P3000B**

**Field Information**

Total Acres:	34.0	Spreadable Acres:	31.7
Non-Spreadable Acres:	2.3	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	80	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2017			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	31.7			
Total Applied	107,780 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acre)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P3000C**

**Field Information**

Total Acres:	3.9	Spreadable Acres:	3.7
Non-Spreadable Acres:	0.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	85	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Mar 2018			
Manure Source	GDU			
Application Rate	3,300 gal/a			
Acres Covered	3.7			
Total Applied	12,210 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	127			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	139			
K <sub>2</sub> O (lbs/acre)	83			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000D

**Field Information**

Total Acres:	3.7	Spreadable Acres:	1.9
Non-Spreadable Acres:	1.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	85	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000E**

**Field Information**

Total Acres:	111.4	Spreadable Acres:	98.9
Non-Spreadable Acres:	12.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	85	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4200**

**Field Information**

Total Acres:	11.3	Spreadable Acres:	9.8
Non-Spreadable Acres:	1.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4300**

**Field Information**

Total Acres:	17.1	Spreadable Acres:	13.6
Non-Spreadable Acres:	3.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4400**

**Field Information**

Total Acres:	35.6	Spreadable Acres:	31.0
Non-Spreadable Acres:	4.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	115	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Mar 2018			
Manure Source	Gestation			
Application Rate	7,600 gal/a			
Acres Covered	31.0			
Total Applied	235,600 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	125			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	190			
K <sub>2</sub> O (lbs/acre)	309			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602524P4600**

**Field Information**

Total Acres:	53.7	Spreadable Acres:	50.9
Non-Spreadable Acres:	2.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602525P1500B

**Field Information**

Total Acres:	19.5	Spreadable Acres:	18.7
Non-Spreadable Acres:	0.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	40	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602525P1500C**

**Field Information**

Total Acres:	34.8	Spreadable Acres:	33.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000F

Field Information

Total Acres:	23.1	Spreadable Acres:	20.6
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652003P4800B**

**Field Information**

Total Acres:	11.5	Spreadable Acres:	10.4
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	45	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800C

Field Information

Total Acres:	28.6	Spreadable Acres:	26.2
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	140	65	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652003P4800D**

**Field Information**

Total Acres:	26.1	Spreadable Acres:	22.3
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Jul 2018			
Manure Source	Gestation			
Application Rate	5,800 gal/a			
Acres Covered	22.3			
Total Applied	129,340 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	96			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	145			
K <sub>2</sub> O (lbs/acre)	235			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000B

**Field Information**

Total Acres:	5.8	Spreadable Acres:	4.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	70	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000C**

**Field Information**

Total Acres:	23.5	Spreadable Acres:	17.6
Non-Spreadable Acres:	5.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000D**

**Field Information**

Total Acres:	16.6	Spreadable Acres:	13.4
Non-Spreadable Acres:	3.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000E**

**Field Information**

Total Acres:	37.1	Spreadable Acres:	30.1
Non-Spreadable Acres:	7.0	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1200B**

**Field Information**

Total Acres:	35.8	Spreadable Acres:	32.0
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	35	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1200C

**Field Information**

Total Acres:	18.7	Spreadable Acres:	15.6
Non-Spreadable Acres:	3.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	35	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P2100**

**Field Information**

Total Acres:	24.7	Spreadable Acres:	22.2
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	30	60

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2017 - 7/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P2500**

**Field Information**

Total Acres:	121.7	Spreadable Acres:	116.1
Non-Spreadable Acres:	5.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

Summary Tables - 8/2017 - 7/2018

F. Manure Summary: 8/2017 - 7/2018

	Source 1	Source 2		
Source	Gestation	GDU		
Units	gals	gals		
Beginning of Year Inventory	0	0		
<b>Inputs</b>				
Production	3,984,872	530,368		
Imports - off farm	0	0		
Transfers - on farm	0	0		
Total Inputs	3,984,872	530,368		
<b>Outputs</b>				
Land Applied	2,182,560	303,500		
Exports - off farm	0	0		
Transfers - on farm	0	0		
Total Outputs	2,182,560	303,500		
End of Year Inventory	1,802,312	226,868		

G. Land Applied Nutrient Summary: 8/2017 - 7/2018

	Total Applied	PAN <sup>1</sup>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Manure Source</b>	(tons or gals)	-----lbs-----		
Gestation	2,182,560 gals	36,004	54,635	88,660
GDU	303,500 gals	11,688	12,762	7,599
<b>Manure Total</b>		47,692	67,397	96,259
	Total Applied	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Fertilizer Source</b>	(lbs or gals)	-----lbs-----		
<b>Fertilizer Total</b>		0	0	0
<b>Total</b>		47,692	67,397	96,259

### H. Lime Recommendations

These lime recommendations are one-time applications meant to be applied only once to adjust soil pH to its desired level. If you have already applied the recommended lime rate in a previous year of this plan please disregard these recommendations.

#### Lime Recommendations<sup>1</sup>

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs EMg/acre <sup>4</sup>
MO602419P1300		14.4	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602419P4000		112.2	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602420P3400		30.9	2015	6.5	5.9	Medium	1,306	High	1,565	0 [D]
MO602420P4000		108.8	2015	6.5	5.7	Medium	1,358	High	1,765	0 [D]
MO602421P3500B		25.2	2015	6.4	5.7	Medium	1,334	High	1,740	0 [D]
MO602421P3500C		19.8	2015	6.4	5.6	Medium	1,238	High	1,815	0 [D]
MO602429P8000B		98.7	2015	6.6	6.1	High	1,522	High	1,295	0 [D]
MO602429P8000C		24.1	2015	6.7	6.4	High	1,562	High	495	0 [D]
MO602429P8000D		186.1	2015	6.7	6.5	High	1,290	High	0	0
MO602430P1150B		6.0	2012	7.1	6.5	High	566	High	0	0
MO602430P1150C		6.9	2015	6.4	5.8	Medium	1,584	High	1,650	0 [D]
MO602430P1400		21.0	2012	7.1	6.5	High	566	High	0	0
		0.0	2012	6.6	5.7	**	652	**	**	**
MO602419P3000B		34.0	2015	6.4	5.8	Medium	1,502	High	1,650	0 [D]
MO602419P3000C		3.9	2015	6.3	5.6	Medium	1,574	High	1,790	0 [D]
MO602419P3000D		3.7	2015	6.3	5.5	Medium	1,370	High	1,850	0 [D]
MO602429P8000E		111.4	2015	6.7	6.3	High	1,506	High	840	0 [D]
MO602430P4200		11.3	2015		7.0	*	842	*	*	*

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs EMg/acre <sup>4</sup>
MO602430P4300		17.1	2015		7.0	*	835	*	*	*
MO602430P4400		35.6	2015	6.7	6.2	High	1,324	High	1,105	0 [D]
MO602524P4600		53.7	2016	6.7	6.6	High	888	High	0	0
MO602525P1500B		19.5	2016	6.5	5.8	Medium	1,018	High	1,675	0 [D]
MO602525P1500C		34.8	2016	6.6	6.1	High	1,158	High	1,295	0 [D]
MO602429P8000F		23.1	2016	6.7	6.3	High	1,192	High	840	0 [D]
MO652003P4800B		11.5	2015		7.8	*	318	*	*	*
MO652003P4800C		28.6	2015		7.8	*	318	*	*	*
MO652003P4800D		26.1	2016	6.7	6.3	High	852	High	0	0
MO652010P1000B		5.8	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000C		23.5	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000D		16.6	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000E		37.1	2016	6.7	6.5	High	940	High	0	0
MO652010P1200B		35.8	2015	6.7	6.2	High	774	High	1,105	0 [D]
MO652010P1200C		18.7	2015	6.7	6.1	High	720	High	1,315	0 [D]
MO652010P2100		24.7	2015	6.7	6.1	High	878	High	1,315	0 [D]
MO652010P2500		121.7	2016		7.1	*	389	*	*	*

<sup>1</sup>These lime recommendations assume you used the University of Missouri soil testing laboratory, or comparable lab.

<sup>2</sup>NA = Neutralizable Acidity, units in meq/100g soil.

<sup>3</sup>ENM = Effective Neutralizing Material.

<sup>4</sup>EMg = Effective Magnesium.

\*\* - No recommendation: No crop has been selected for this field in order to calculate lime recommendation.

\* - No recommendation: Some soil test data is missing for this field. Please run the Essential Data Detection Tool.

[D] To determine limestone needed in tons/acre, divide your ENM requirement by the guarantee of your limestone dealer.

I. Crop Record Keeping Table: 8/2017 - 7/2018

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
MO602419P 1300		Corn grain					
MO602419P 4000		Corn grain					
MO602420P 3400		Corn grain					
MO602420P 4000		Soybeans					
MO602421P 3500B		Corn grain					
MO602421P 3500C		Corn grain					
MO602429P 8000B		Corn grain					
MO602429P 8000C		Soybeans					
MO602429P 8000D		Soybeans					
MO602430P 1150B		Corn grain					
MO602430P 1150C		Corn grain					
MO602430P 1400		Corn grain					
MO602419P 3000B		Corn grain					
MO602419P 3000C		Corn grain					
MO602419P 3000D		Corn grain					
MO602429P		Soybeans					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
8000E							
MO602430P 4200		Soybeans					
MO602430P 4300		Soybeans					
MO602430P 4400		Corn grain					
MO602524P 4600		Soybeans					
MO602525P 1500B		Soybeans					
MO602525P 1500C		Soybeans					
MO602429P 8000F		Soybeans					
MO652003P 4800B		Soybeans					
MO652003P 4800C		Corn grain					
MO652003P 4800D		Cool season grass pasture					
MO652010P 1000B		Corn grain					
MO652010P 1000C		Soybeans					
MO652010P 1000D		Soybeans					
MO652010P 1000E		Cool season grass pasture					
MO652010P 1200B		Corn grain					
MO652010P		Soybeans					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
1200C							
MO652010P 2100		Soybeans					
MO652010P 2500		Cool season grass pasture					

# Missouri Comprehensive Nutrient Management Plan FARMER PLAN DOCUMENT

**Operation Name: Trenton Farms RE, LLC**

This plan is a summary of the key activities for one year of the nutrient management plan. The period of time covered by this plan is:

8/2018 - 7/2019

The objective of this document is to provide a concise list of the nutrient management activities on this operation for the year indicated. Activities covered by this plan include:

- Planned manure transfers and sales.
- Planned manure application dates and rates.
- Planned fertilizer application dates and rates.

Record keeping is an important part of nutrient management. Please use the space in this plan to record what actually occurred on each field.

**Farm contact information:** Trenton Farms RE, LLC  
SW State Highway W  
Trenton, MO 64683  
507-825-7032 (office)

**Whole Plan Period:** August 2017 - July 2022

# Contents

Manure Transfers ( Table A ) .....	3
Planned Manure Applications ( Table B ) .....	4
Manure Application Records .....	6
Planned Commercial Fertilizer Applications ( Table C ) .....	7
Commercial Fertilizer Application Records .....	8
Recommended Manure Management Practices ( Table D ) .....	9
Field by Field Recommendations ( Table E ) .....	10
Summary ( Tables F and G ) .....	45
- Manure Summary	
- Land Applied Nutrient Summary	
Lime Recommendations ( Table H ) .....	46
Crop Record Keeping ( Table I ) .....	48

**A. Manure Transfers - 8/2018 - 7/2019**

*Exports off the Farm: (blank rows are for recording exports as they occur)*

Export Month	Export Year	Source of Manure	Target Export Amount	Units	Receiving Operation	Notes

*Imports onto the Farm: (blank rows are for recording imports as they occur)*

Import Month	Import Year	Source of Manure	Animal Type	Target Import Amount	Units	Notes

*Internal Transfers of Manure: (blank rows are for recording transfers as they occur)*

Transfer Month	Transfer Year	Source of Manure	Manure Destination	Target Transfer Amount	Units	Notes

**B. Planned Manure Applications - 8/2018 - 7/2019**

Month and Year	Field ID	Field SubID	Planned Crop(s)	Source	Application Equipment	Acres Covered	Application Rate	Units per acre	Total Applied
Oct 2018	MO602420P 4000		Corn grain	GDU	Applicator	104.6	3,400	Gal	355,640
Oct 2018	MO602429P 8000C		Corn grain	Gestation	Applicator	21.7	7,900	Gal	171,430
Oct 2018	MO602429P 8000D		Corn grain	Gestation	Applicator	168.2	7,900	Gal	1,328,780
Oct 2018	MO602429P 8000E		Corn grain	Gestation	Applicator	98.9	7,900	Gal	781,310
Oct 2018	MO602430P 4200		Corn grain	GDU	Applicator	7.6	3,700	Gal	27,960
Oct 2018	MO602430P 4300		Corn grain	Gestation	Applicator	13.6	8,500	Gal	115,600
Oct 2018	MO602524P 4600		Corn grain	Gestation	Applicator	50.9	8,200	Gal	417,380
Oct 2018	MO602525P 1500B		Corn grain	Gestation	Applicator	7.2	3,800	Gal	27,240
Nov 2018	MO602430P 4200		Corn grain	GDU	Applicator	2.2	3,700	Gal	8,140
Nov 2018	MO602525P 1500B		Corn grain	Gestation	Applicator	11.5	3,800	Gal	43,700
Apr 2019	MO602429P 8000F		Corn grain	GDU	Applicator	20.6	3,500	Gal	72,100
Apr 2019	MO602525P 1500C		Corn grain	Gestation	Applicator	33.1	4,800	Gal	158,880
Jul 2019	MO652003P 4800D		Cool season grass pasture	Gestation	Applicator	22.3	4,700	Gal	104,810

Manure Application Records - 8/2018 - 7/2019

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
1									
2									
3									
4									
5									
6									
7									

Manure Application Records - 8/2018 - 7/2019 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
1										
2										
3										
4										
5										
6										
7										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

Manure Application Records - 8/2018 - 7/2019

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
8									
9									
10									
11									
12									
13									
14									

Manure Application Records - 8/2018 - 7/2019 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
8										
9										
10										
11										
12										
13										
14										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

**C. Planned Commercial Fertilizer Applications - 8/2018 - 7/2019**

No planned commercial fertilizer applications for the period.



**D. Recommended Manure Management Practices**

Every time you apply manure you should review the following checklist to be sure conditions are favorable for manure applications. **These practices are required on permitted operations and operations that receive cost-share support through EQIP.**

- Know the proper manure source and application rate for each field.
- Keep good records, write down such things as operations performed, dates and times, actual rates, and weather conditions. This document provides record keeping forms.
- No surface application of manure if precipitation, likely to create runoff, is forecasted to occur within 24 hours of the planned application.
- No manure application on land with a slope greater than 20 percent.
- No surface application of manure to frozen, snow-covered or saturated soils.
- Manure applications shall comply with all manure application setbacks defined in the table below:

Manure application setback distances where manure should not be applied. For streams, lakes and wetlands the setback distance is measured from the defined edge of the water feature.

Setback Feature	Application Conditions	Setback Distance (feet)
Public or private drinking water well, drinking water lake or impoundment, or drinking water intake structure.	All applications	300
Other wells including un-plugged abandon wells	All applications	300
Public and privately owned lakes and impoundments not used as a water supply including impoundments with no outlet. Perennial streams, intermittent streams, canals, drainage ditches and wetlands. Tile line inlet (un-plugged during application).	Permanently vegetated setback	35
	Up-gradient, no or insufficient vegetated setback	100
	Down-gradient, no or insufficient vegetated setback	35
Losing streams, cave entrance, spring, or active sinkhole.	All applications	300
Non-owned occupied residence.	All applications	150
Public use area including non-owned businesses.	All applications	150
Public roads and property boundaries.	All applications	50

**The following practices are recommended:**

- Apply nutrients close to crop use to maximize nutrient uptake and reduce potential losses.
- Calibrate and maintain application equipment to apply accurate and uniform rates; all land application equipment should be calibrated at least annually.
- Avoid application when wind is blowing in the direction of neighbors or on weekends and holidays when people are more likely to be outdoors.

**For liquid applications:**

- Adjusting surface application rates to meet infiltration rate and water holding capacity of the soil.
- Irrigation systems should have automatic shut-off devices in case of pressure loss and/or an operator on-site at all times during operation to monitor application equipment.
- The perimeter of all fields receiving manure should be checked regularly during operation of land application equipment to confirm manure is not running off the field or entering waters of the state.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P1300**

**Field Information**

Total Acres:	14.4	Spreadable Acres:	12.2
Non-Spreadable Acres:	2.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	105

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P4000**

**Field Information**

Total Acres:	112.2	Spreadable Acres:	107.8
Non-Spreadable Acres:	4.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	105

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602420P3400**

**Field Information**

Total Acres:	30.9	Spreadable Acres:	29.3
Non-Spreadable Acres:	1.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602420P4000**

**Field Information**

Total Acres:	108.8	Spreadable Acres:	104.6
Non-Spreadable Acres:	4.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	85	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2018			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	104.6			
Total Applied	355,640 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602421P3500B**

**Field Information**

Total Acres:	25.2	Spreadable Acres:	21.6
Non-Spreadable Acres:	3.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602421P3500C**

**Field Information**

Total Acres:	19.8	Spreadable Acres:	18.7
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	0	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000B**

**Field Information**

Total Acres:	98.7	Spreadable Acres:	94.7
Non-Spreadable Acres:	4.0	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	100	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000C**

**Field Information**

Total Acres:	24.1	Spreadable Acres:	21.7
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	95	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2018			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	21.7			
Total Applied	171,430 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000D**

**Field Information**

Total Acres:	186.1	Spreadable Acres:	168.2
Non-Spreadable Acres:	17.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	55	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2018			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	168.2			
Total Applied	1,328,780 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150B

Field Information

Total Acres:	6.0	Spreadable Acres:	4.9
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P1150C**

**Field Information**

Total Acres:	6.9	Spreadable Acres:	6.0
Non-Spreadable Acres:	0.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

**Field Information**

Total Acres:	21.0	Spreadable Acres:	18.6
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

Total Acres:	0.0	Spreadable Acres:	
Non-Spreadable Acres:		Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
------	------------	---	-------------------------------	------------------

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P3000B**

**Field Information**

Total Acres:	34.0	Spreadable Acres:	31.7
Non-Spreadable Acres:	2.3	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P3000C**

**Field Information**

Total Acres:	3.9	Spreadable Acres:	3.7
Non-Spreadable Acres:	0.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	65	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000D

Field Information

Total Acres:	3.7	Spreadable Acres:	1.9
Non-Spreadable Acres:	1.8	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	65	50

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000E

Field Information

Total Acres:	111.4	Spreadable Acres:	98.9
Non-Spreadable Acres:	12.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	105	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2018			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	98.9			
Total Applied	781,310 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4200**

**Field Information**

Total Acres:	11.3	Spreadable Acres:	9.8
Non-Spreadable Acres:	1.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	140	75	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1	Application 2		
<b>Application Time</b>	Oct 2018	Nov 2018		
<b>Manure Source</b>	GDU	GDU		
<b>Application Rate</b>	3,700 gal/a	3,700 gal/a		
<b>Acres Covered</b>	7.6	2.2		
<b>Total Applied</b>	27,960 gal	8,140 gal		
<b>Loads per Field</b>	0.0	0.0		
<b>Placement</b>	Injected	Injected		
<b>N (lbs/acres)</b>	142	142		
<b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b>	155	155		
<b>K<sub>2</sub>O (lbs/acre)</b>	93	93		

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4300**

**Field Information**

Total Acres:	17.1	Spreadable Acres:	13.6
Non-Spreadable Acres:	3.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	140	70	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2018			
Manure Source	Gestation			
Application Rate	8,500 gal/a			
Acres Covered	13.6			
Total Applied	115,600 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	140			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	213			
K <sub>2</sub> O (lbs/acre)	345			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4400

Field Information

Total Acres:	35.6	Spreadable Acres:	31.0
Non-Spreadable Acres:	4.6	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	100	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602524P4600**

**Field Information**

Total Acres:	53.7	Spreadable Acres:	50.9
Non-Spreadable Acres:	2.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	65	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2018			
Manure Source	Gestation			
Application Rate	8,200 gal/a			
Acres Covered	50.9			
Total Applied	417,380 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	135			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	205			
K <sub>2</sub> O (lbs/acre)	333			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602525P1500B**

**Field Information**

Total Acres:	19.5	Spreadable Acres:	18.7
Non-Spreadable Acres:	0.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	55	5

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1	Application 2		
Application Time	Oct 2018	Nov 2018		
Manure Source	Gestation	Gestation		
Application Rate	3,800 gal/a	3,800 gal/a		
Acres Covered	7.2	11.5		
Total Applied	27,240 gal	43,700 gal		
Loads per Field	0.0	0.0		
Placement	Injected	Injected		
N (lbs/acres)	63	63		
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	95	95		
K <sub>2</sub> O (lbs/acre)	154	154		

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602525P1500C**

**Field Information**

Total Acres:	34.8	Spreadable Acres:	33.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	70	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Apr 2019			
Manure Source	Gestation			
Application Rate	4,800 gal/a			
Acres Covered	33.1			
Total Applied	158,880 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	79			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	120			
K <sub>2</sub> O (lbs/acre)	195			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000F**

**Field Information**

Total Acres:	23.1	Spreadable Acres:	20.6
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	70	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Apr 2019			
Manure Source	GDU			
Application Rate	3,500 gal/a			
Acres Covered	20.6			
Total Applied	72,100 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	135			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	147			
K <sub>2</sub> O (lbs/acre)	88			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652003P4800B**

**Field Information**

Total Acres:	11.5	Spreadable Acres:	10.4
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	140	65	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800C

Field Information

Total Acres:	28.6	Spreadable Acres:	26.2
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	45	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800D

Field Information

Total Acres:	26.1	Spreadable Acres:	22.3
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Jul 2019			
Manure Source	Gestation			
Application Rate	4,700 gal/a			
Acres Covered	22.3			
Total Applied	104,810 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	78			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	118			
K <sub>2</sub> O (lbs/acre)	191			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000B**

**Field Information**

Total Acres:	5.8	Spreadable Acres:	4.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000C

Field Information

Total Acres:	23.5	Spreadable Acres:	17.6
Non-Spreadable Acres:	5.9	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	70	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000D**

**Field Information**

Total Acres:	16.6	Spreadable Acres:	13.4
Non-Spreadable Acres:	3.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	70	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000E**

**Field Information**

Total Acres:	37.1	Spreadable Acres:	30.1
Non-Spreadable Acres:	7.0	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

**8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1200B**

**Field Information**

Total Acres:	35.8	Spreadable Acres:	32.0
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	20	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1200C

Field Information

Total Acres:	18.7	Spreadable Acres:	15.6
Non-Spreadable Acres:	3.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	60	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P2100

Field Information

Total Acres:	24.7	Spreadable Acres:	22.2
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	135	55	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2018 - 7/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P2500

Field Information

Total Acres:	121.7	Spreadable Acres:	116.1
Non-Spreadable Acres:	5.6	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

Summary Tables - 8/2018 - 7/2019

F. Manure Summary: 8/2018 - 7/2019

	Source 1	Source 2		
Source	Gestation	GDU		
Units	gals	gals		
Beginning of Year Inventory	1,802,312	226,868		
<b>Inputs</b>				
Production	3,984,872	530,368		
Imports - off farm	0	0		
Transfers - on farm	0	0		
Total Inputs	3,984,872	530,368		
<b>Outputs</b>				
Land Applied	3,149,130	463,840		
Exports - off farm	0	0		
Transfers - on farm	0	0		
Total Outputs	3,149,130	463,840		
End of Year Inventory	2,638,054	293,396		

G. Land Applied Nutrient Summary: 8/2018 - 7/2019

	Total Applied	PAN <sup>1</sup>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Manure Source</b>	(tons or gals)	-----lbs-----		
Gestation	3,149,130 gals	51,853	78,895	127,940
GDU	463,840 gals	17,875	19,505	11,616
<b>Manure Total</b>		69,728	98,400	139,556
<b>Fertilizer</b>				
	Total Applied	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Fertilizer Source</b>	(lbs or gals)	-----lbs-----		
<b>Fertilizer Total</b>		0	0	0
<b>Total</b>		69,728	98,400	139,556

### H. Lime Recommendations

These lime recommendations are one-time applications meant to be applied only once to adjust soil pH to its desired level. If you have already applied the recommended lime rate in a previous year of this plan please disregard these recommendations.

#### Lime Recommendations<sup>1</sup>

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs EMG/acre <sup>4</sup>
MO602419P1300		14.4	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602419P4000		112.2	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602420P3400		30.9	2015	6.5	5.9	Medium	1,306	High	1,565	0 [D]
MO602420P4000		108.8	2015	6.5	5.7	Medium	1,358	High	1,765	0 [D]
MO602421P3500B		25.2	2015	6.4	5.7	Medium	1,334	High	1,740	0 [D]
MO602421P3500C		19.8	2015	6.4	5.6	Medium	1,238	High	1,815	0 [D]
MO602429P8000B		98.7	2015	6.6	6.1	High	1,522	High	1,295	0 [D]
MO602429P8000C		24.1	2015	6.7	6.4	High	1,562	High	495	0 [D]
MO602429P8000D		186.1	2015	6.7	6.5	High	1,290	High	0	0
MO602430P1150B		6.0	2012	7.1	6.5	High	566	High	0	0
MO602430P1150C		6.9	2015	6.4	5.8	Medium	1,584	High	1,650	0 [D]
MO602430P1400		21.0	2012	7.1	6.5	High	566	High	0	0
		0.0	2012	6.6	5.7	**	652	**	**	**
MO602419P3000B		34.0	2015	6.4	5.8	Medium	1,502	High	1,650	0 [D]
MO602419P3000C		3.9	2015	6.3	5.6	Medium	1,574	High	1,790	0 [D]
MO602419P3000D		3.7	2015	6.3	5.5	Medium	1,370	High	1,850	0 [D]
MO602429P8000E		111.4	2015	6.7	6.3	High	1,506	High	840	0 [D]
MO602430P4200		11.3	2015		7.0	*	842	*	*	*

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs ENM/acre <sup>4</sup>
MO602430P4300		17.1	2015		7.0	*	835	*	*	*
MO602430P4400		35.6	2015	6.7	6.2	High	1,324	High	1,105	0 [D]
MO602524P4600		53.7	2016	6.7	6.6	High	888	High	0	0
MO602525P1500B		19.5	2016	6.5	5.8	Medium	1,018	High	1,675	0 [D]
MO602525P1500C		34.8	2016	6.6	6.1	High	1,158	High	1,295	0 [D]
MO602429P8000F		23.1	2016	6.7	6.3	High	1,192	High	840	0 [D]
MO652003P4800B		11.5	2015		7.8	*	318	*	*	*
MO652003P4800C		28.6	2015		7.8	*	318	*	*	*
MO652003P4800D		26.1	2016	6.7	6.3	High	852	High	0	0
MO652010P1000B		5.8	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000C		23.5	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000D		16.6	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000E		37.1	2016	6.7	6.5	High	940	High	0	0
MO652010P1200B		35.8	2015	6.7	6.2	High	774	High	1,105	0 [D]
MO652010P1200C		18.7	2015	6.7	6.1	High	720	High	1,315	0 [D]
MO652010P2100		24.7	2015	6.7	6.1	High	878	High	1,315	0 [D]
MO652010P2500		121.7	2016		7.1	*	389	*	*	*

<sup>1</sup>These lime recommendations assume you used the University of Missouri soil testing laboratory, or comparable lab.

<sup>2</sup>NA = Neutralizable Acidity, units in meq/100g soil.

<sup>3</sup>ENM = Effective Neutralizing Material.

<sup>4</sup>EMg = Effective Magnesium.

\*\* - No recommendation: No crop has been selected for this field in order to calculate lime recommendation.

\* - No recommendation: Some soil test data is missing for this field. Please run the Essential Data Detection Tool.

[D] To determine limestone needed in tons/acre, divide your ENM requirement by the guarantee of your limestone dealer.

I. Crop Record Keeping Table: 8/2018 - 7/2019

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
MO602419P 1300		Soybeans					
MO602419P 4000		Soybeans					
MO602420P 3400		Soybeans					
MO602420P 4000		Corn grain					
MO602421P 3500B		Soybeans					
MO602421P 3500C		Soybeans					
MO602429P 8000B		Soybeans					
MO602429P 8000C		Corn grain					
MO602429P 8000D		Corn grain					
MO602430P 1150B		Soybeans					
MO602430P 1150C		Soybeans					
MO602430P 1400		Soybeans					
MO602419P 3000B		Soybeans					
MO602419P 3000C		Soybeans					
MO602419P 3000D		Soybeans					
MO602429P		Corn grain					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
8000E							
MO602430P 4200		Corn grain					
MO602430P 4300		Corn grain					
MO602430P 4400		Soybeans					
MO602524P 4600		Corn grain					
MO602525P 1500B		Corn grain					
MO602525P 1500C		Corn grain					
MO602429P 8000F		Corn grain					
MO652003P 4800B		Corn grain					
MO652003P 4800C		Soybeans					
MO652003P 4800D		Cool season grass pasture					
MO652010P 1000B		Soybeans					
MO652010P 1000C		Corn grain					
MO652010P 1000D		Corn grain					
MO652010P 1000E		Cool season grass pasture					
MO652010P 1200B		Soybeans					
MO652010P		Corn grain					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
1200C							
MO652010P 2100		Corn grain					
MO652010P 2500		Cool season grass pasture					

# Missouri

## Comprehensive Nutrient Management Plan

### FARMER PLAN DOCUMENT

**Operation Name: Trenton Farms RE, LLC**

This plan is a summary of the key activities for one year of the nutrient management plan. The period of time covered by this plan is:

8/2019 - 7/2020

The objective of this document is to provide a concise list of the nutrient management activities on this operation for the year indicated. Activities covered by this plan include:

- Planned manure transfers and sales.
- Planned manure application dates and rates.
- Planned fertilizer application dates and rates.

Record keeping is an important part of nutrient management. Please use the space in this plan to record what actually occurred on each field.

**Farm contact information:** Trenton Farms RE, LLC  
SW State Highway W  
Trenton, MO 64683  
507-825-7032 (office)

**Whole Plan Period:** August 2017 - July 2022

# Contents

Manure Transfers ( Table A ) .....	3
Planned Manure Applications ( Table B ) .....	4
Manure Application Records .....	7
Planned Commercial Fertilizer Applications ( Table C ) .....	8
Commercial Fertilizer Application Records .....	9
Recommended Manure Management Practices ( Table D ) .....	10
Field by Field Recommendations ( Table E ) .....	11
Summary ( Tables F and G ).....	46
- Manure Summary	
- Land Applied Nutrient Summary	
Lime Recommendations ( Table H ) .....	47
Crop Record Keeping ( Table I ).....	49

**A. Manure Transfers - 8/2019 - 7/2020**

Exports off the Farm: (blank rows are for recording exports as they occur)

Export Month	Export Year	Source of Manure	Target Export Amount	Units	Receiving Operation	Notes

Imports onto the Farm: (blank rows are for recording imports as they occur)

Import Month	Import Year	Source of Manure	Animal Type	Target Import Amount	Units	Notes

Internal Transfers of Manure: (blank rows are for recording transfers as they occur)

Transfer Month	Transfer Year	Source of Manure	Manure Destination	Target Transfer Amount	Units	Notes

**B. Planned Manure Applications - 8/2019 - 7/2020**

Month and Year	Field ID	Field SubID	Planned Crop(s)	Source	Application Equipment	Acres Covered	Application Rate	Units per acre	Total Applied
Oct 2019	MO602419P 1300		Corn grain	Gestation	Applicator	12.2	6,100	Gal	74,420
Oct 2019	MO602419P 3000B		Corn grain	Gestation	Applicator	31.7	7,900	Gal	250,430
Oct 2019	MO602419P 4000		Corn grain	Gestation	Applicator	107.8	6,100	Gal	657,580
Oct 2019	MO602420P 3400		Corn grain	Gestation	Applicator	29.3	7,900	Gal	231,470
Oct 2019	MO602421P 3500B		Corn grain	GDU	Applicator	20.6	3,400	Gal	70,150
Oct 2019	MO602429P 8000B		Corn grain	GDU	Applicator	94.7	3,500	Gal	331,450
Oct 2019	MO602430P 1400		Corn grain	GDU	Applicator	18.6	2,600	Gal	48,360
Oct 2019	MO602430P 4400		Corn grain	Gestation	Applicator	31.0	7,600	Gal	235,600
Oct 2019	MO652003P 4800C		Corn grain	Gestation	Applicator	26.2	8,500	Gal	222,700
Oct 2019	MO652010P 1000B		Corn grain	Gestation	Applicator	4.1	7,900	Gal	32,390
Oct 2019	MO652010P 1200B		Corn grain	Gestation	Applicator	32.0	7,900	Gal	252,800
Nov 2019	MO602421P 3500B		Corn grain	GDU	Applicator	1.0	3,400	Gal	3,400
Nov 2019	MO602421P 3500C		Corn grain	Gestation	Applicator	18.7	7,600	Gal	142,120
Nov 2019	MO602430P 1150B		Corn grain	GDU	Applicator	4.9	2,600	Gal	12,740
Nov 2019	MO602430P 1150C		Corn grain	GDU	Applicator	6.0	3,400	Gal	20,400

Manure Application Records - 8/2019 - 7/2020

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
1									
2									
3									
4									
5									
6									
7									

Manure Application Records - 8/2019 - 7/2020 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
1										
2										
3										
4										
5										
6										
7										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

Manure Application Records - 8/2019 - 7/2020

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
8									
9									
10									
11									
12									
13									
14									

Manure Application Records - 8/2019 - 7/2020 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
8										
9										
10										
11										
12										
13										
14										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

Manure Application Records - 8/2019 - 7/2020

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
15									
16									
17									
18									
19									
20									
21									

Manure Application Records - 8/2019 - 7/2020 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
15										
16										
17										
18										
19										
20										
21										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

**C. Planned Commercial Fertilizer Applications - 8/2019 - 7/2020**

No planned commercial fertilizer applications for the period.



**D. Recommended Manure Management Practices**

Every time you apply manure you should review the following checklist to be sure conditions are favorable for manure applications. **These practices are required on permitted operations and operations that receive cost-share support through EQIP.**

- Know the proper manure source and application rate for each field.
- Keep good records, write down such things as operations performed, dates and times, actual rates, and weather conditions. This document provides record keeping forms.
- No surface application of manure if precipitation, likely to create runoff, is forecasted to occur within 24 hours of the planned application.
- No manure application on land with a slope greater than 20 percent.
- No surface application of manure to frozen, snow-covered or saturated soils.
- Manure applications shall comply with all manure application setbacks defined in the table below:

Manure application setback distances where manure should not be applied. For streams, lakes and wetlands the setback distance is measured from the defined edge of the water feature.

Setback Feature	Application Conditions	Setback Distance (feet)
Public or private drinking water well, drinking water lake or impoundment, or drinking water intake structure.	All applications	300
Other wells including un-plugged abandon wells	All applications	300
Public and privately owned lakes and impoundments not used as a water supply including impoundments with no outlet. Perennial streams, intermittent streams, canals, drainage ditches and wetlands. Tile line inlet (un-plugged during application).	Permanently vegetated setback	35
	Up-gradient, no or insufficient vegetated setback	100
	Down-gradient, no or insufficient vegetated setback	35
Losing streams, cave entrance, spring, or active sinkhole.	All applications	300
Non-owned occupied residence.	All applications	150
Public use area including non-owned businesses.	All applications	150
Public roads and property boundaries.	All applications	50

**The following practices are recommended:**

- Apply nutrients close to crop use to maximize nutrient uptake and reduce potential losses.
- Calibrate and maintain application equipment to apply accurate and uniform rates; all land application equipment should be calibrated at least annually.
- Avoid application when wind is blowing in the direction of neighbors or on weekends and holidays when people are more likely to be outdoors.

**For liquid applications:**

- Adjusting surface application rates to meet infiltration rate and water holding capacity of the soil.
- Irrigation systems should have automatic shut-off devices in case of pressure loss and/or an operator on-site at all times during operation to monitor application equipment.
- The perimeter of all fields receiving manure should be checked regularly during operation of land application equipment to confirm manure is not running off the field or entering waters of the state.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P1300**

**Field Information**

Total Acres:	14.4	Spreadable Acres:	12.2
Non-Spreadable Acres:	2.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	75	80

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
<b>Application Time</b>	Oct 2019			
<b>Manure Source</b>	Gestation			
<b>Application Rate</b>	6,100 gal/a			
<b>Acres Covered</b>	12.2			
<b>Total Applied</b>	74,420 gal			
<b>Loads per Field</b>	0.0			
<b>Placement</b>	Injected			
<b>N (lbs/acres)</b>	101			
<b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b>	153			
<b>K<sub>2</sub>O (lbs/acre)</b>	248			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P4000**

**Field Information**

Total Acres:	112.2	Spreadable Acres:	107.8
Non-Spreadable Acres:	4.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	75	80

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2019			
Manure Source	Gestation			
Application Rate	6,100 gal/a			
Acres Covered	107.8			
Total Applied	657,580 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	101			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	153			
K <sub>2</sub> O (lbs/acre)	248			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602420P3400

Field Information

Total Acres:	30.9	Spreadable Acres:	29.3
Non-Spreadable Acres:	1.6	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	70	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2019			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	29.3			
Total Applied	231,470 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602420P4000

**Field Information**

Total Acres:	108.8	Spreadable Acres:	104.6
Non-Spreadable Acres:	4.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	70	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602421P3500B**

**Field Information**

Total Acres:	25.2	Spreadable Acres:	21.6
Non-Spreadable Acres:	3.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	80	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1	Application 2		
<b>Application Time</b>	Oct 2019	Nov 2019		
<b>Manure Source</b>	GDU	GDU		
<b>Application Rate</b>	3,400 gal/a	3,400 gal/a		
<b>Acres Covered</b>	20.6	1.0		
<b>Total Applied</b>	70,150 gal	3,400 gal		
<b>Loads per Field</b>	0.0	0.0		
<b>Placement</b>	Injected	Injected		
<b>N (lbs/acres)</b>	131	131		
<b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b>	143	143		
<b>K<sub>2</sub>O (lbs/acre)</b>	85	85		

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602421P3500C

Field Information

Total Acres:	19.8	Spreadable Acres:	18.7
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	0	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Nov 2019			
Manure Source	Gestation			
Application Rate	7,600 gal/a			
Acres Covered	18.7			
Total Applied	142,120 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	125			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	190			
K <sub>2</sub> O (lbs/acre)	309			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000B

**Field Information**

Total Acres:	98.7	Spreadable Acres:	94.7
Non-Spreadable Acres:	4.0	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	115	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2019			
Manure Source	GDU			
Application Rate	3,500 gal/a			
Acres Covered	94.7			
Total Applied	331,450 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	135			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	147			
K <sub>2</sub> O (lbs/acre)	88			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000C

Field Information

Total Acres:	24.1	Spreadable Acres:	21.7
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	75	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000D**

**Field Information**

Total Acres:	186.1	Spreadable Acres:	168.2
Non-Spreadable Acres:	17.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150B

Field Information

Total Acres:	6.0	Spreadable Acres:	4.9
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	80	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Nov 2019			
Manure Source	GDU			
Application Rate	2,600 gal/a			
Acres Covered	4.9			
Total Applied	12,740 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	100			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	109			
K <sub>2</sub> O (lbs/acre)	65			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150C

Field Information

Total Acres:	6.9	Spreadable Acres:	6.0
Non-Spreadable Acres:	0.9	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	75	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Nov 2019			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	6.0			
Total Applied	20,400 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

**Field Information**

Total Acres:	21.0	Spreadable Acres:	18.6
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	80	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2019			
Manure Source	GDU			
Application Rate	2,600 gal/a			
Acres Covered	18.6			
Total Applied	48,360 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	100			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	109			
K <sub>2</sub> O (lbs/acre)	65			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

Total Acres:	0.0	Spreadable Acres:	
Non-Spreadable Acres:		Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
------	------------	---	-------------------------------	------------------

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000B

Field Information

Total Acres:	34.0	Spreadable Acres:	31.7
Non-Spreadable Acres:	2.3	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	80	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2019			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	31.7			
Total Applied	250,430 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000C

**Field Information**

Total Acres:	3.9	Spreadable Acres:	3.7
Non-Spreadable Acres:	0.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	85	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000D

**Field Information**

Total Acres:	3.7	Spreadable Acres:	1.9
Non-Spreadable Acres:	1.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	85	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602429P8000E**

**Field Information**

Total Acres:	111.4	Spreadable Acres:	98.9
Non-Spreadable Acres:	12.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	85	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4200

Field Information

Total Acres:	11.3	Spreadable Acres:	9.8
Non-Spreadable Acres:	1.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4300

**Field Information**

Total Acres:	17.1	Spreadable Acres:	13.6
Non-Spreadable Acres:	3.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4400**

**Field Information**

Total Acres:	35.6	Spreadable Acres:	31.0
Non-Spreadable Acres:	4.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	115	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2019			
Manure Source	Gestation			
Application Rate	7,600 gal/a			
Acres Covered	31.0			
Total Applied	235,600 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	125			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	190			
K <sub>2</sub> O (lbs/acre)	309			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602524P4600**

**Field Information**

Total Acres:	53.7	Spreadable Acres:	50.9
Non-Spreadable Acres:	2.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602525P1500B**

**Field Information**

Total Acres:	19.5	Spreadable Acres:	18.7
Non-Spreadable Acres:	0.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	40	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602525P1500C

**Field Information**

Total Acres:	34.8	Spreadable Acres:	33.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000F

**Field Information**

Total Acres:	23.1	Spreadable Acres:	20.6
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800B

**Field Information**

Total Acres:	11.5	Spreadable Acres:	10.4
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	45	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800C

Field Information

Total Acres:	28.6	Spreadable Acres:	26.2
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	140	65	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2019			
Manure Source	Gestation			
Application Rate	8,500 gal/a			
Acres Covered	26.2			
Total Applied	222,700 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	140			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	213			
K <sub>2</sub> O (lbs/acre)	345			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652003P4800D**

**Field Information**

Total Acres:	26.1	Spreadable Acres:	22.3
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000B

**Field Information**

Total Acres:	5.8	Spreadable Acres:	4.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	70	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2019			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	4.1			
Total Applied	32,390 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000C

**Field Information**

Total Acres:	23.5	Spreadable Acres:	17.6
Non-Spreadable Acres:	5.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000D**

**Field Information**

Total Acres:	16.6	Spreadable Acres:	13.4
Non-Spreadable Acres:	3.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000E**

**Field Information**

Total Acres:	37.1	Spreadable Acres:	30.1
Non-Spreadable Acres:	7.0	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1200B**

**Field Information**

Total Acres:	35.8	Spreadable Acres:	32.0
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	35	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2019			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	32.0			
Total Applied	252,800 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1200C**

**Field Information**

Total Acres:	18.7	Spreadable Acres:	15.6
Non-Spreadable Acres:	3.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	35	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P2100**

**Field Information**

Total Acres:	24.7	Spreadable Acres:	22.2
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	30	60

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2019 - 7/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P2500**

**Field Information**

Total Acres:	121.7	Spreadable Acres:	116.1
Non-Spreadable Acres:	5.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

Summary Tables - 8/2019 - 7/2020

F. Manure Summary: 8/2019 - 7/2020

	Source 1	Source 2		
Source	Gestation	GDU		
Units	gals	gals		
Beginning of Year Inventory	2,638,054	293,396		
<b>Inputs</b>				
Production	3,984,872	530,368		
Imports - off farm	0	0		
Transfers - on farm	0	0		
Total Inputs	3,984,872	530,368		
<b>Outputs</b>				
Land Applied	2,099,510	486,500		
Exports - off farm	0	0		
Transfers - on farm	0	0		
Total Outputs	2,099,510	486,500		
End of Year Inventory	4,523,416	337,264		

G. Land Applied Nutrient Summary: 8/2019 - 7/2020

	Total Applied		PAN <sup>1</sup>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Manure Source</b>	(tons or gals)		-----lbs-----		
Gestation	2,099,510	gals	34,624	52,610	85,325
GDU	486,500	gals	18,750	20,429	12,208
<b>Manure Total</b>			53,374	73,039	97,533
	Total Applied		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Fertilizer Source</b>	(lbs or gals)		-----lbs-----		
<b>Fertilizer Total</b>			0	0	0
<b>Total</b>			53,374	73,039	97,533

### H. Lime Recommendations

These lime recommendations are one-time applications meant to be applied only once to adjust soil pH to its desired level. If you have already applied the recommended lime rate in a previous year of this plan please disregard these recommendations.

#### Lime Recommendations<sup>1</sup>

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs ENM/acre <sup>4</sup>
MO602419P1300		14.4	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602419P4000		112.2	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602420P3400		30.9	2015	6.5	5.9	Medium	1,306	High	1,565	0 [D]
MO602420P4000		108.8	2015	6.5	5.7	Medium	1,358	High	1,765	0 [D]
MO602421P3500B		25.2	2015	6.4	5.7	Medium	1,334	High	1,740	0 [D]
MO602421P3500C		19.8	2015	6.4	5.6	Medium	1,238	High	1,815	0 [D]
MO602429P8000B		98.7	2015	6.6	6.1	High	1,522	High	1,295	0 [D]
MO602429P8000C		24.1	2015	6.7	6.4	High	1,562	High	495	0 [D]
MO602429P8000D		186.1	2015	6.7	6.5	High	1,290	High	0	0
MO602430P1150B		6.0	2012	7.1	6.5	High	566	High	0	0
MO602430P1150C		6.9	2015	6.4	5.8	Medium	1,584	High	1,650	0 [D]
MO602430P1400		21.0	2012	7.1	6.5	High	566	High	0	0
		0.0	2012	6.6	5.7	**	652	**	**	**
MO602419P3000B		34.0	2015	6.4	5.8	Medium	1,502	High	1,650	0 [D]
MO602419P3000C		3.9	2015	6.3	5.6	Medium	1,574	High	1,790	0 [D]
MO602419P3000D		3.7	2015	6.3	5.5	Medium	1,370	High	1,850	0 [D]
MO602429P8000E		111.4	2015	6.7	6.3	High	1,506	High	840	0 [D]
MO602430P4200		11.3	2015		7.0	*	842	*	*	*

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs EMg/acre <sup>4</sup>
MO602430P4300		17.1	2015		7.0	*	835	*	*	*
MO602430P4400		35.6	2015	6.7	6.2	High	1,324	High	1,105	0 [D]
MO602524P4600		53.7	2016	6.7	6.6	High	888	High	0	0
MO602525P1500B		19.5	2016	6.5	5.8	Medium	1,018	High	1,675	0 [D]
MO602525P1500C		34.8	2016	6.6	6.1	High	1,158	High	1,295	0 [D]
MO602429P8000F		23.1	2016	6.7	6.3	High	1,192	High	840	0 [D]
MO652003P4800B		11.5	2015		7.8	*	318	*	*	*
MO652003P4800C		28.6	2015		7.8	*	318	*	*	*
MO652003P4800D		26.1	2016	6.7	6.3	High	852	High	0	0
MO652010P1000B		5.8	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000C		23.5	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000D		16.6	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000E		37.1	2016	6.7	6.5	High	940	High	0	0
MO652010P1200B		35.8	2015	6.7	6.2	High	774	High	1,105	0 [D]
MO652010P1200C		18.7	2015	6.7	6.1	High	720	High	1,315	0 [D]
MO652010P2100		24.7	2015	6.7	6.1	High	878	High	1,315	0 [D]
MO652010P2500		121.7	2016		7.1	*	389	*	*	*

<sup>1</sup>These lime recommendations assume you used the University of Missouri soil testing laboratory, or comparable lab.

<sup>2</sup>NA = Neutralizable Acidity, units in meq/100g soil.

<sup>3</sup>ENM = Effective Neutralizing Material.

<sup>4</sup>EMg = Effective Magnesium.

\*\* - No recommendation: No crop has been selected for this field in order to calculate lime recommendation.

\* - No recommendation: Some soil test data is missing for this field. Please run the Essential Data Detection Tool.

[D] To determine limestone needed in tons/acre, divide your ENM requirement by the guarantee of your limestone dealer.

I. Crop Record Keeping Table: 8/2019 - 7/2020

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
MO602419P 1300		Corn grain					
MO602419P 4000		Corn grain					
MO602420P 3400		Corn grain					
MO602420P 4000		Soybeans					
MO602421P 3500B		Corn grain					
MO602421P 3500C		Corn grain					
MO602429P 8000B		Corn grain					
MO602429P 8000C		Soybeans					
MO602429P 8000D		Soybeans					
MO602430P 1150B		Corn grain					
MO602430P 1150C		Corn grain					
MO602430P 1400		Corn grain					
MO602419P 3000B		Corn grain					
MO602419P 3000C		Corn grain					
MO602419P 3000D		Corn grain					
MO602429P		Soybeans					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
8000E							
MO602430P 4200		Soybeans					
MO602430P 4300		Soybeans					
MO602430P 4400		Corn grain					
MO602524P 4600		Soybeans					
MO602525P 1500B		Soybeans					
MO602525P 1500C		Soybeans					
MO602429P 8000F		Soybeans					
MO652003P 4800B		Soybeans					
MO652003P 4800C		Corn grain					
MO652003P 4800D		Cool season grass pasture					
MO652010P 1000B		Corn grain					
MO652010P 1000C		Soybeans					
MO652010P 1000D		Soybeans					
MO652010P 1000E		Cool season grass pasture					
MO652010P 1200B		Corn grain					
MO652010P		Soybeans					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
1200C							
MO652010P 2100		Soybeans					
MO652010P 2500		Cool season grass pasture					

# Missouri Comprehensive Nutrient Management Plan FARMER PLAN DOCUMENT

**Operation Name: Trenton Farms RE, LLC**

This plan is a summary of the key activities for one year of the nutrient management plan. The period of time covered by this plan is:

8/2020 - 7/2021

The objective of this document is to provide a concise list of the nutrient management activities on this operation for the year indicated. Activities covered by this plan include:

- Planned manure transfers and sales.
- Planned manure application dates and rates.
- Planned fertilizer application dates and rates.

Record keeping is an important part of nutrient management. Please use the space in this plan to record what actually occurred on each field.

**Farm contact information:** Trenton Farms RE, LLC  
SW State Highway W  
Trenton, MO 64683  
507-825-7032 (office)

**Whole Plan Period:** August 2017 - July 2022

# Contents

Manure Transfers ( Table A ) .....	3
Planned Manure Applications ( Table B ) .....	4
Manure Application Records .....	6
Planned Commercial Fertilizer Applications ( Table C ) .....	7
Commercial Fertilizer Application Records .....	8
Recommended Manure Management Practices ( Table D ) .....	9
Field by Field Recommendations ( Table E ) .....	10
Summary ( Tables F and G ) .....	45
- Manure Summary	
- Land Applied Nutrient Summary	
Lime Recommendations ( Table H ) .....	46
Crop Record Keeping ( Table I ) .....	48

**A. Manure Transfers - 8/2020 - 7/2021**

Exports off the Farm: (blank rows are for recording exports as they occur)

Export Month	Export Year	Source of Manure	Target Export Amount	Units	Receiving Operation	Notes

Imports onto the Farm: (blank rows are for recording imports as they occur)

Import Month	Import Year	Source of Manure	Animal Type	Target Import Amount	Units	Notes

Internal Transfers of Manure: (blank rows are for recording transfers as they occur)

Transfer Month	Transfer Year	Source of Manure	Manure Destination	Target Transfer Amount	Units	Notes

**B. Planned Manure Applications - 8/2020 - 7/2021**

Month and Year	Field ID	Field SubID	Planned Crop(s)	Source	Application Equipment	Acres Covered	Application Rate	Units per acre	Total Applied
Aug 2020	MO652003P 4800D		Cool season grass pasture	Gestation	Applicator	22.3	5,800	Gal	129,340
Oct 2020	MO602420P 4000		Corn grain	GDU	Applicator	104.6	3,400	Gal	355,640
Oct 2020	MO602429P 8000C		Corn grain	GDU	Applicator	21.7	3,400	Gal	73,780
Oct 2020	MO602429P 8000D		Corn grain	Gestation	Applicator	168.2	7,900	Gal	1,328,780
Oct 2020	MO602429P 8000E		Corn grain	Gestation	Applicator	98.9	7,900	Gal	781,310
Oct 2020	MO602429P 8000F		Corn grain	Gestation	Applicator	20.6	8,200	Gal	168,920
Oct 2020	MO602430P 4200		Corn grain	GDU	Applicator	9.8	3,700	Gal	36,260
Oct 2020	MO602430P 4300		Corn grain	Gestation	Applicator	13.6	8,500	Gal	115,600
Oct 2020	MO602524P 4600		Corn grain	Gestation	Applicator	50.9	8,200	Gal	417,380
Oct 2020	MO602525P 1500B		Corn grain	Gestation	Applicator	18.7	3,800	Gal	71,060
Oct 2020	MO602525P 1500C		Corn grain	Gestation	Applicator	33.1	4,800	Gal	158,880
Oct 2020	MO652003P 4800B		Corn grain	Gestation	Applicator	10.4	8,500	Gal	88,400

Manure Application Records - 8/2020 - 7/2021

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
1									
2									
3									
4									
5									
6									
7									

Manure Application Records - 8/2020 - 7/2021 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
1										
2										
3										
4										
5										
6										
7										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

Manure Application Records - 8/2020 - 7/2021

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
8									
9									
10									
11									
12									
13									
14									

Manure Application Records - 8/2020 - 7/2021 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
8										
9										
10										
11										
12										
13										
14										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

**C. Planned Commercial Fertilizer Applications - 8/2020 - 7/2021**

No planned commercial fertilizer applications for the period.



**D. Recommended Manure Management Practices**

Every time you apply manure you should review the following checklist to be sure conditions are favorable for manure applications. **These practices are required on permitted operations and operations that receive cost-share support through EQIP.**

- Know the proper manure source and application rate for each field.
- Keep good records, write down such things as operations performed, dates and times, actual rates, and weather conditions. This document provides record keeping forms.
- No surface application of manure if precipitation, likely to create runoff, is forecasted to occur within 24 hours of the planned application.
- No manure application on land with a slope greater than 20 percent.
- No surface application of manure to frozen, snow-covered or saturated soils.
- Manure applications shall comply with all manure application setbacks defined in the table below:

Manure application setback distances where manure should not be applied. For streams, lakes and wetlands the setback distance is measured from the defined edge of the water feature.

Setback Feature	Application Conditions	Setback Distance (feet)
Public or private drinking water well, drinking water lake or impoundment, or drinking water intake structure.	All applications	300
Other wells including un-plugged abandon wells	All applications	300
Public and privately owned lakes and impoundments not used as a water supply including impoundments with no outlet. Perennial streams, intermittent streams, canals, drainage ditches and wetlands. Tile line inlet (un-plugged during application).	Permanently vegetated setback	35
	Up-gradient, no or insufficient vegetated setback	100
	Down-gradient, no or insufficient vegetated setback	35
Losing streams, cave entrance, spring, or active sinkhole.	All applications	300
Non-owned occupied residence.	All applications	150
Public use area including non-owned businesses.	All applications	150
Public roads and property boundaries.	All applications	50

**The following practices are recommended:**

- Apply nutrients close to crop use to maximize nutrient uptake and reduce potential losses.
- Calibrate and maintain application equipment to apply accurate and uniform rates; all land application equipment should be calibrated at least annually.
- Avoid application when wind is blowing in the direction of neighbors or on weekends and holidays when people are more likely to be outdoors.

**For liquid applications:**

- Adjusting surface application rates to meet infiltration rate and water holding capacity of the soil.
- Irrigation systems should have automatic shut-off devices in case of pressure loss and/or an operator on-site at all times during operation to monitor application equipment.
- The perimeter of all fields receiving manure should be checked regularly during operation of land application equipment to confirm manure is not running off the field or entering waters of the state.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P1300

Field Information

Total Acres:	14.4	Spreadable Acres:	12.2
Non-Spreadable Acres:	2.2	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	105

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P4000**

**Field Information**

Total Acres:	112.2	Spreadable Acres:	107.8
Non-Spreadable Acres:	4.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	105

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602420P3400**

**Field Information**

Total Acres:	30.9	Spreadable Acres:	29.3
Non-Spreadable Acres:	1.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602420P4000

Field Information

Total Acres:	108.8	Spreadable Acres:	104.6
Non-Spreadable Acres:	4.2	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	85	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	104.6			
Total Applied	355,640 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602421P3500B

**Field Information**

Total Acres:	25.2	Spreadable Acres:	21.6
Non-Spreadable Acres:	3.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602421P3500C

Field Information

Total Acres:	19.8	Spreadable Acres:	18.7
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	0	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000B

Field Information

Total Acres:	98.7	Spreadable Acres:	94.7
Non-Spreadable Acres:	4.0	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	100	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000C

Field Information

Total Acres:	24.1	Spreadable Acres:	21.7
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	95	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	21.7			
Total Applied	73,780 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

Field Information

Total Acres:	186.1	Spreadable Acres:	168.2
Non-Spreadable Acres:	17.9	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	55	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	168.2			
Total Applied	1,328,780 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150B

Field Information

Total Acres:	6.0	Spreadable Acres:	4.9
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P1150C**

**Field Information**

Total Acres:	6.9	Spreadable Acres:	6.0
Non-Spreadable Acres:	0.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

Total Acres:	21.0	Spreadable Acres:	18.6
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

Total Acres:	0.0	Spreadable Acres:	
Non-Spreadable Acres:		Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
------	------------	---	-------------------------------	------------------

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000B

**Field Information**

Total Acres:	34.0	Spreadable Acres:	31.7
Non-Spreadable Acres:	2.3	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	60	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000C

Field Information

Total Acres:	3.9	Spreadable Acres:	3.7
Non-Spreadable Acres:	0.2	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	65	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000D

**Field Information**

Total Acres:	3.7	Spreadable Acres:	1.9
Non-Spreadable Acres:	1.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	65	50

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000E

Field Information

Total Acres:	111.4	Spreadable Acres:	98.9
Non-Spreadable Acres:	12.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	105	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	98.9			
Total Applied	781,310 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4200

Field Information

Total Acres:	11.3	Spreadable Acres:	9.8
Non-Spreadable Acres:	1.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	140	75	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	GDU			
Application Rate	3,700 gal/a			
Acres Covered	9.8			
Total Applied	36,260 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	142			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	155			
K <sub>2</sub> O (lbs/acre)	93			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4300

Field Information

Total Acres:	17.1	Spreadable Acres:	13.6
Non-Spreadable Acres:	3.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	140	70	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	8,500 gal/a			
Acres Covered	13.6			
Total Applied	115,600 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	140			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	213			
K <sub>2</sub> O (lbs/acre)	345			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4400

Field Information

Total Acres:	35.6	Spreadable Acres:	31.0
Non-Spreadable Acres:	4.6	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	100	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602524P4600

Field Information

Total Acres:	53.7	Spreadable Acres:	50.9
Non-Spreadable Acres:	2.8	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	65	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	8,200 gal/a			
Acres Covered	50.9			
Total Applied	417,380 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	135			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	205			
K <sub>2</sub> O (lbs/acre)	333			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602525P1500B**

**Field Information**

Total Acres:	19.5	Spreadable Acres:	18.7
Non-Spreadable Acres:	0.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	55	5

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	3,800 gal/a			
Acres Covered	18.7			
Total Applied	71,060 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	63			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	95			
K <sub>2</sub> O (lbs/acre)	154			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602525P1500C

Field Information

Total Acres:	34.8	Spreadable Acres:	33.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	70	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	4,800 gal/a			
Acres Covered	33.1			
Total Applied	158,880 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	79			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	120			
K <sub>2</sub> O (lbs/acre)	195			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000F

Field Information

Total Acres:	23.1	Spreadable Acres:	20.6
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	70	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	8,200 gal/a			
Acres Covered	20.6			
Total Applied	168,920 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	135			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	205			
K <sub>2</sub> O (lbs/acre)	333			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800B

Field Information

Total Acres:	11.5	Spreadable Acres:	10.4
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	140	65	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2020			
Manure Source	Gestation			
Application Rate	8,500 gal/a			
Acres Covered	10.4			
Total Applied	88,400 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	140			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	213			
K <sub>2</sub> O (lbs/acre)	345			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800C

**Field Information**

Total Acres:	28.6	Spreadable Acres:	26.2
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	45	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800D

**Field Information**

Total Acres:	26.1	Spreadable Acres:	22.3
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Aug 2020			
Manure Source	Gestation			
Application Rate	5,800 gal/a			
Acres Covered	22.3			
Total Applied	129,340 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	96			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	145			
K <sub>2</sub> O (lbs/acre)	235			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000B

**Field Information**

Total Acres:	5.8	Spreadable Acres:	4.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000C**

**Field Information**

Total Acres:	23.5	Spreadable Acres:	17.6
Non-Spreadable Acres:	5.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	70	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000D

Field Information

Total Acres:	16.6	Spreadable Acres:	13.4
Non-Spreadable Acres:	3.2	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	70	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000E

Field Information

Total Acres:	37.1	Spreadable Acres:	30.1
Non-Spreadable Acres:	7.0	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1200B

Field Information

Total Acres:	35.8	Spreadable Acres:	32.0
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	20	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1200C

**Field Information**

Total Acres:	18.7	Spreadable Acres:	15.6
Non-Spreadable Acres:	3.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	60	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P2100

Field Information

Total Acres:	24.7	Spreadable Acres:	22.2
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	135	55	40

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2020 - 7/2021 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P2500**

**Field Information**

Total Acres:	121.7	Spreadable Acres:	116.1
Non-Spreadable Acres:	5.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.4000009536743 ton	95	5	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

Summary Tables - 8/2020 - 7/2021

F. Manure Summary: 8/2020 - 7/2021

	Source 1	Source 2		
Source	Gestation	GDU		
Units	gals	gals		
Beginning of Year Inventory	4,523,416	337,264		
<b>Inputs</b>				
Production	3,984,872	530,368		
Imports - off farm	0	0		
Transfers - on farm	0	0		
Total Inputs	3,984,872	530,368		
<b>Outputs</b>				
Land Applied	3,259,670	465,680		
Exports - off farm	0	0		
Transfers - on farm	0	0		
Total Outputs	3,259,670	465,680		
End of Year Inventory	5,248,618	401,952		

G. Land Applied Nutrient Summary: 8/2020 - 7/2021

	Total Applied	PAN <sup>1</sup>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Manure Source</b>	(tons or gals)	-----lbs-----		
Gestation	3,259,670 gals	53,670	81,638	132,403
GDU	465,680 gals	17,938	19,580	11,647
<b>Manure Total</b>		71,608	101,218	144,050
	<b>Total Applied</b>	<b>N</b>	<b>P<sub>2</sub>O<sub>5</sub></b>	<b>K<sub>2</sub>O</b>
<b>Fertilizer Source</b>	(lbs or gals)	-----lbs-----		
<b>Fertilizer Total</b>		0	0	0
<b>Total</b>		71,608	101,218	144,050

**H. Lime Recommendations**

These lime recommendations are one-time applications meant to be applied only once to adjust soil pH to its desired level. If you have already applied the recommended lime rate in a previous year of this plan please disregard these recommendations.

**Lime Recommendations<sup>1</sup>**

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs EMG/acre <sup>4</sup>
MO602419P1300		14.4	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602419P4000		112.2	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602420P3400		30.9	2015	6.5	5.9	Medium	1,306	High	1,565	0 [D]
MO602420P4000		108.8	2015	6.5	5.7	Medium	1,358	High	1,765	0 [D]
MO602421P3500B		25.2	2015	6.4	5.7	Medium	1,334	High	1,740	0 [D]
MO602421P3500C		19.8	2015	6.4	5.6	Medium	1,238	High	1,815	0 [D]
MO602429P8000B		98.7	2015	6.6	6.1	High	1,522	High	1,295	0 [D]
MO602429P8000C		24.1	2015	6.7	6.4	High	1,562	High	495	0 [D]
MO602429P8000D		186.1	2015	6.7	6.5	High	1,290	High	0	0
MO602430P1150B		6.0	2012	7.1	6.5	High	566	High	0	0
MO602430P1150C		6.9	2015	6.4	5.8	Medium	1,584	High	1,650	0 [D]
MO602430P1400		21.0	2012	7.1	6.5	High	566	High	0	0
		0.0	2012	6.6	5.7	**	652	**	**	**
MO602419P3000B		34.0	2015	6.4	5.8	Medium	1,502	High	1,650	0 [D]
MO602419P3000C		3.9	2015	6.3	5.6	Medium	1,574	High	1,790	0 [D]
MO602419P3000D		3.7	2015	6.3	5.5	Medium	1,370	High	1,850	0 [D]
MO602429P8000E		111.4	2015	6.7	6.3	High	1,506	High	840	0 [D]
MO602430P4200		11.3	2015		7.0	*	842	*	*	*

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs EMg/acre <sup>4</sup>
MO602430P4300		17.1	2015		7.0	*	835	*	*	*
MO602430P4400		35.6	2015	6.7	6.2	High	1,324	High	1,105	0 [D]
MO602524P4600		53.7	2016	6.7	6.6	High	888	High	0	0
MO602525P1500B		19.5	2016	6.5	5.8	Medium	1,018	High	1,675	0 [D]
MO602525P1500C		34.8	2016	6.6	6.1	High	1,158	High	1,295	0 [D]
MO602429P8000F		23.1	2016	6.7	6.3	High	1,192	High	840	0 [D]
MO652003P4800B		11.5	2015		7.8	*	318	*	*	*
MO652003P4800C		28.6	2015		7.8	*	318	*	*	*
MO652003P4800D		26.1	2016	6.7	6.3	High	852	High	0	0
MO652010P1000B		5.8	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000C		23.5	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000D		16.6	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000E		37.1	2016	6.7	6.5	High	940	High	0	0
MO652010P1200B		35.8	2015	6.7	6.2	High	774	High	1,105	0 [D]
MO652010P1200C		18.7	2015	6.7	6.1	High	720	High	1,315	0 [D]
MO652010P2100		24.7	2015	6.7	6.1	High	878	High	1,315	0 [D]
MO652010P2500		121.7	2016		7.1	*	389	*	*	*

<sup>1</sup>These lime recommendations assume you used the University of Missouri soil testing laboratory, or comparable lab.

<sup>2</sup>NA = Neutralizable Acidity, units in meq/100g soil.

<sup>3</sup>ENM = Effective Neutralizing Material.

<sup>4</sup>EMg = Effective Magnesium.

\*\* - No recommendation: No crop has been selected for this field in order to calculate lime recommendation.

\* - No recommendation: Some soil test data is missing for this field. Please run the Essential Data Detection Tool.

[D] To determine limestone needed in tons/acre, divide your ENM requirement by the guarantee of your limestone dealer.

I. Crop Record Keeping Table: 8/2020 - 7/2021

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
MO602419P 1300		Soybeans					
MO602419P 4000		Soybeans					
MO602420P 3400		Soybeans					
MO602420P 4000		Corn grain					
MO602421P 3500B		Soybeans					
MO602421P 3500C		Soybeans					
MO602429P 8000B		Soybeans					
MO602429P 8000C		Corn grain					
MO602429P 8000D		Corn grain					
MO602430P 1150B		Soybeans					
MO602430P 1150C		Soybeans					
MO602430P 1400		Soybeans					
MO602419P 3000B		Soybeans					
MO602419P 3000C		Soybeans					
MO602419P 3000D		Soybeans					
MO602429P		Corn grain					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
8000E							
MO602430P 4200		Corn grain					
MO602430P 4300		Corn grain					
MO602430P 4400		Soybeans					
MO602524P 4600		Corn grain					
MO602525P 1500B		Corn grain					
MO602525P 1500C		Corn grain					
MO602429P 8000F		Corn grain					
MO652003P 4800B		Corn grain					
MO652003P 4800C		Soybeans					
MO652003P 4800D		Cool season grass pasture					
MO652010P 1000B		Soybeans					
MO652010P 1000C		Corn grain					
MO652010P 1000D		Corn grain					
MO652010P 1000E		Cool season grass pasture					
MO652010P 1200B		Soybeans					
MO652010P		Corn grain					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
1200C							
MO652010P 2100		Corn grain					
MO652010P 2500		Cool season grass pasture					

# Missouri

## Comprehensive Nutrient Management Plan

### FARMER PLAN DOCUMENT

**Operation Name: Trenton Farms RE, LLC**

This plan is a summary of the key activities for one year of the nutrient management plan. The period of time covered by this plan is:

8/2021 - 7/2022

The objective of this document is to provide a concise list of the nutrient management activities on this operation for the year indicated. Activities covered by this plan include:

- Planned manure transfers and sales.
- Planned manure application dates and rates.
- Planned fertilizer application dates and rates.

Record keeping is an important part of nutrient management. Please use the space in this plan to record what actually occurred on each field.

**Farm contact information:** Trenton Farms RE, LLC  
SW State Highway W  
Trenton, MO 64683  
507-825-7032 (office)

**Whole Plan Period:** August 2017 - July 2022

# Contents

Manure Transfers ( Table A ) .....	3
Planned Manure Applications ( Table B ) .....	4
Manure Application Records .....	8
Planned Commercial Fertilizer Applications ( Table C ) .....	9
Commercial Fertilizer Application Records .....	10
Recommended Manure Management Practices ( Table D ) .....	11
Field by Field Recommendations ( Table E ) .....	12
Summary ( Tables F and G ).....	47
- Manure Summary	
- Land Applied Nutrient Summary	
Lime Recommendations ( Table H ) .....	48
Crop Record Keeping ( Table I ).....	50

**A. Manure Transfers - 8/2021 - 7/2022**

Exports off the Farm: (blank rows are for recording exports as they occur)

Export Month	Export Year	Source of Manure	Target Export Amount	Units	Receiving Operation	Notes

Imports onto the Farm: (blank rows are for recording imports as they occur)

Import Month	Import Year	Source of Manure	Animal Type	Target Import Amount	Units	Notes

Internal Transfers of Manure: (blank rows are for recording transfers as they occur)

Transfer Month	Transfer Year	Source of Manure	Manure Destination	Target Transfer Amount	Units	Notes

**B. Planned Manure Applications - 8/2021 - 7/2022**

Month and Year	Field ID	Field SubID	Planned Crop(s)	Source	Application Equipment	Acres Covered	Application Rate	Units per acre	Total Applied
Aug 2021	MO652010P 2500		Cool season grass pasture	Gestation	Applicator	116.1	5,800	Gal	673,380
Sep 2021	MO652010P 1000E		Cool season grass pasture	Gestation	Applicator	30.1	5,800	Gal	174,580
Oct 2021	MO602419P 1300		Corn grain	Gestation	Applicator	12.2	6,100	Gal	74,420
Oct 2021	MO602419P 3000B		Corn grain	Gestation	Applicator	31.7	7,900	Gal	250,430
Oct 2021	MO602419P 4000		Corn grain	Gestation	Applicator	107.8	6,100	Gal	657,580
Oct 2021	MO602420P 3400		Corn grain	Gestation	Applicator	29.3	7,900	Gal	231,470
Oct 2021	MO602421P 3500B		Corn grain	GDU	Applicator	21.6	3,400	Gal	73,440
Oct 2021	MO602421P 3500C		Corn grain	GDU	Applicator	18.7	3,300	Gal	61,710
Oct 2021	MO602429P 8000B		Corn grain	GDU	Applicator	94.7	3,500	Gal	331,450
Oct 2021	MO602430P 1150B		Corn grain	GDU	Applicator	4.9	2,600	Gal	12,740
Oct 2021	MO602430P 1150C		Corn grain	GDU	Applicator	6.0	3,400	Gal	20,400
Oct 2021	MO602430P 1400		Corn grain	GDU	Applicator	18.6	2,600	Gal	48,360
Oct 2021	MO602430P 4400		Corn grain	Gestation	Applicator	31.0	7,600	Gal	235,600
Oct 2021	MO652003P 4800C		Corn grain	Gestation	Applicator	26.2	8,500	Gal	222,700
Oct 2021	MO652010P 1000B		Corn grain	Gestation	Applicator	4.1	7,900	Gal	32,390

Month and Year	Field ID	Field SubID	Planned Crop(s)	Source	Application Equipment	Acres Covered	Application Rate	Units per acre	Total Applied
Oct 2021	MO652010P 1200B		Corn grain	Gestation	Applicator	32.0	7,900	Gal	252,800
Apr 2022	MO602419P 3000C		Corn grain	GDU	Applicator	3.7	3,300	Gal	12,210
May 2022	MO652010P 2500		Cool season grass pasture	Gestation	Applicator	116.1	4,700	Gal	545,670
Jul 2022	MO652003P 4800D		Cool season grass pasture	Gestation	Applicator	22.3	5,800	Gal	129,340
Jul 2022	MO652010P 1000E		Cool season grass pasture	Gestation	Applicator	30.1	4,700	Gal	141,470

Manure Application Records - 8/2021 - 7/2022

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
1									
2									
3									
4									
5									
6									
7									

Manure Application Records - 8/2021 - 7/2022 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
1										
2										
3										
4										
5										
6										
7										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

Manure Application Records - 8/2021 - 7/2022

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
8									
9									
10									
11									
12									
13									
14									

Manure Application Records - 8/2021 - 7/2022 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
8										
9										
10										
11										
12										
13										
14										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "N1" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.

Manure Application Records - 8/2021 - 7/2022

App #	Date	Field ID	Field SubID	Manure Source	Application Equipment	Actual Rate	Actual Loads	Total Applied	Acres Covered
15									
16									
17									
18									
19									
20									
21									

Manure Application Records - 8/2021 - 7/2022 (continued)

App #	Applicator's Name	<sup>1</sup> Soil Condition	<sup>2</sup> Ground Cover	<sup>3</sup> Days to Incorporate	Air Temp	Wind Speed	Wind Direction	<sup>4</sup> Rain Before	<sup>5</sup> Rain After	<sup>6</sup> Weather
15										
16										
17										
18										
19										
20										
21										

1. Soil condition at time of operations: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
2. Percent residue or ground cover at time of application.
3. Number of days to incorporate manure after application: Use "NJ" for no incorporation.
4. Amount of rainfall during the 24 hours prior to application.
5. Amount of rainfall during the 24 hours after application.
6. Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.



**C. Planned Commercial Fertilizer Applications - 8/2021 - 7/2022**

No planned commercial fertilizer applications for the period.



**D. Recommended Manure Management Practices**

Every time you apply manure you should review the following checklist to be sure conditions are favorable for manure applications. **These practices are required on permitted operations and operations that receive cost-share support through EQIP.**

- Know the proper manure source and application rate for each field.
- Keep good records, write down such things as operations performed, dates and times, actual rates, and weather conditions. This document provides record keeping forms.
- No surface application of manure if precipitation, likely to create runoff, is forecasted to occur within 24 hours of the planned application.
- No manure application on land with a slope greater than 20 percent.
- No surface application of manure to frozen, snow-covered or saturated soils.
- Manure applications shall comply with all manure application setbacks defined in the table below:

Manure application setback distances where manure should not be applied. For streams, lakes and wetlands the setback distance is measured from the defined edge of the water feature.

Setback Feature	Application Conditions	Setback Distance (feet)
Public or private drinking water well, drinking water lake or impoundment, or drinking water intake structure.	All applications	300
Other wells including un-plugged abandon wells	All applications	300
Public and privately owned lakes and impoundments not used as a water supply including impoundments with no outlet. Perennial streams, intermittent streams, canals, drainage ditches and wetlands. Tile line inlet (un-plugged during application).	Permanently vegetated setback	35
	Up-gradient, no or insufficient vegetated setback	100
	Down-gradient, no or insufficient vegetated setback	35
Losing streams, cave entrance, spring, or active sinkhole.	All applications	300
Non-owned occupied residence.	All applications	150
Public use area including non-owned businesses.	All applications	150
Public roads and property boundaries.	All applications	50

**The following practices are recommended:**

- Apply nutrients close to crop use to maximize nutrient uptake and reduce potential losses.
- Calibrate and maintain application equipment to apply accurate and uniform rates; all land application equipment should be calibrated at least annually.
- Avoid application when wind is blowing in the direction of neighbors or on weekends and holidays when people are more likely to be outdoors.

**For liquid applications:**

- Adjusting surface application rates to meet infiltration rate and water holding capacity of the soil.
- Irrigation systems should have automatic shut-off devices in case of pressure loss and/or an operator on-site at all times during operation to monitor application equipment.
- The perimeter of all fields receiving manure should be checked regularly during operation of land application equipment to confirm manure is not running off the field or entering waters of the state.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P1300

**Field Information**

Total Acres:	14.4	Spreadable Acres:	12.2
Non-Spreadable Acres:	2.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	75	80

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	6,100 gal/a			
Acres Covered	12.2			
Total Applied	74,420 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	101			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	153			
K <sub>2</sub> O (lbs/acre)	248			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

Field Information

Total Acres:	112.2	Spreadable Acres:	107.8
Non-Spreadable Acres:	4.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	75	80

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	6,100 gal/a			
Acres Covered	107.8			
Total Applied	657,580 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	101			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	153			
K <sub>2</sub> O (lbs/acre)	248			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602420P3400**

**Field Information**

Total Acres:	30.9	Spreadable Acres:	29.3
Non-Spreadable Acres:	1.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	70	20

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	29.3			
Total Applied	231,470 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602420P4000

**Field Information**

Total Acres:	108.8	Spreadable Acres:	104.6
Non-Spreadable Acres:	4.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	70	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602421P3500B

**Field Information**

Total Acres:	25.2	Spreadable Acres:	21.6
Non-Spreadable Acres:	3.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	80	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	21.6			
Total Applied	73,440 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602421P3500C**

**Field Information**

Total Acres:	19.8	Spreadable Acres:	18.7
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	0	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	GDU			
Application Rate	3,300 gal/a			
Acres Covered	18.7			
Total Applied	61,710 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	127			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	139			
K <sub>2</sub> O (lbs/acre)	83			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000B

**Field Information**

Total Acres:	98.7	Spreadable Acres:	94.7
Non-Spreadable Acres:	4.0	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	135	115	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	GDU			
Application Rate	3,500 gal/a			
Acres Covered	94.7			
Total Applied	331,450 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	135			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	147			
K <sub>2</sub> O (lbs/acre)	88			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000C

**Field Information**

Total Acres:	24.1	Spreadable Acres:	21.7
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	75	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

**Field Information**

Total Acres:	186.1	Spreadable Acres:	168.2
Non-Spreadable Acres:	17.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150B

Field Information

Total Acres:	6.0	Spreadable Acres:	4.9
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	80	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2021			
Manure Source	GDU			
Application Rate	2,600 gal/a			
Acres Covered	4.9			
Total Applied	12,740 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	100			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	109			
K <sub>2</sub> O (lbs/acre)	65			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1150C

**Field Information**

Total Acres:	6.9	Spreadable Acres:	6.0
Non-Spreadable Acres:	0.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	75	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	GDU			
Application Rate	3,400 gal/a			
Acres Covered	6.0			
Total Applied	20,400 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	131			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	143			
K <sub>2</sub> O (lbs/acre)	85			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

Total Acres:	21.0	Spreadable Acres:	18.6
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	100	80	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2021			
Manure Source	GDU			
Application Rate	2,600 gal/a			
Acres Covered	18.6			
Total Applied	48,360 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	100			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	109			
K <sub>2</sub> O (lbs/acre)	65			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

**8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

Total Acres:	0.0	Spreadable Acres:	
Non-Spreadable Acres:		Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
------	------------	---	-------------------------------	------------------

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P3000B**

**Field Information**

Total Acres:	34.0	Spreadable Acres:	31.7
Non-Spreadable Acres:	2.3	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	80	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	31.7			
Total Applied	250,430 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000C

**Field Information**

Total Acres:	3.9	Spreadable Acres:	3.7
Non-Spreadable Acres:	0.2	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	85	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Apr 2022			
Manure Source	GDU			
Application Rate	3,300 gal/a			
Acres Covered	3.7			
Total Applied	12,210 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	127			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	139			
K <sub>2</sub> O (lbs/acre)	83			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000D

**Field Information**

Total Acres:	3.7	Spreadable Acres:	1.9
Non-Spreadable Acres:	1.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	130	85	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000E

**Field Information**

Total Acres:	111.4	Spreadable Acres:	98.9
Non-Spreadable Acres:	12.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	85	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4200

**Field Information**

Total Acres:	11.3	Spreadable Acres:	9.8
Non-Spreadable Acres:	1.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4300

**Field Information**

Total Acres:	17.1	Spreadable Acres:	13.6
Non-Spreadable Acres:	3.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4400

Field Information

Total Acres:	35.6	Spreadable Acres:	31.0
Non-Spreadable Acres:	4.6	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	122.099998474121 bu	125	115	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	7,600 gal/a			
Acres Covered	31.0			
Total Applied	235,600 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	125			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	190			
K <sub>2</sub> O (lbs/acre)	309			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602524P4600

Field Information

Total Acres:	53.7	Spreadable Acres:	50.9
Non-Spreadable Acres:	2.8	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	30

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602525P1500B

**Field Information**

Total Acres:	19.5	Spreadable Acres:	18.7
Non-Spreadable Acres:	0.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	40	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602525P1500C

**Field Information**

Total Acres:	34.8	Spreadable Acres:	33.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	50	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000F

**Field Information**

Total Acres:	23.1	Spreadable Acres:	20.6
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	43.7999992370605 bu	0	55	45

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800B

Field Information

Total Acres:	11.5	Spreadable Acres:	10.4
Non-Spreadable Acres:	1.1	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	45	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652003P4800C**

**Field Information**

Total Acres:	28.6	Spreadable Acres:	26.2
Non-Spreadable Acres:	2.4	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	140	65	25

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	8,500 gal/a			
Acres Covered	26.2			
Total Applied	222,700 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	140			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	213			
K <sub>2</sub> O (lbs/acre)	345			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652003P4800D

**Field Information**

Total Acres:	26.1	Spreadable Acres:	22.3
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	40	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Jul 2022			
Manure Source	Gestation			
Application Rate	5,800 gal/a			
Acres Covered	22.3			
Total Applied	129,340 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	96			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	145			
K <sub>2</sub> O (lbs/acre)	235			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

**8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P1000B**

**Field Information**

Total Acres:	5.8	Spreadable Acres:	4.1
Non-Spreadable Acres:	1.7	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	70	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	4.1			
Total Applied	32,390 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000C

**Field Information**

Total Acres:	23.5	Spreadable Acres:	17.6
Non-Spreadable Acres:	5.9	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000D

Field Information

Total Acres:	16.6	Spreadable Acres:	13.4
Non-Spreadable Acres:	3.2	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	50	55

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

No planned manure application.

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1000E

Field Information

Total Acres:	37.1	Spreadable Acres:	30.1
Non-Spreadable Acres:	7.0	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	0

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1	Application 2		
Application Time	Sep 2021	Jul 2022		
Manure Source	Gestation	Gestation		
Application Rate	5,800 gal/a	4,700 gal/a		
Acres Covered	30.1	30.1		
Total Applied	174,580 gal	141,470 gal		
Loads per Field	0.0	0.0		
Placement	Injected	Injected		
N (lbs/acres)	96	78		
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	145	118		
K <sub>2</sub> O (lbs/acre)	235	191		

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1200B

Field Information

Total Acres:	35.8	Spreadable Acres:	32.0
Non-Spreadable Acres:	3.8	Distance to Storage:	0.00 miles

Fertilizer Recommendation (lbs/acre)

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Corn grain	124.300003051758 bu	130	35	15

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

Manure Management

	Application 1			
Application Time	Oct 2021			
Manure Source	Gestation			
Application Rate	7,900 gal/a			
Acres Covered	32.0			
Total Applied	252,800 gal			
Loads per Field	0.0			
Placement	Injected			
N (lbs/acres)	130			
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	198			
K <sub>2</sub> O (lbs/acre)	321			

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

Crop Management

\* Nitrogen Credit: Nitrogen requirements have been reduced by 30 pounds per acre for this corn crop as it follows soybeans.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P1200C

**Field Information**

Total Acres:	18.7	Spreadable Acres:	15.6
Non-Spreadable Acres:	3.1	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	35	35

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO652010P2100

**Field Information**

Total Acres:	24.7	Spreadable Acres:	22.2
Non-Spreadable Acres:	2.5	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Soybeans	40.0999984741211 bu	0	30	60

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

No planned manure application.

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**8/2021 - 7/2022 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO652010P2500**

**Field Information**

Total Acres:	121.7	Spreadable Acres:	116.1
Non-Spreadable Acres:	5.6	Distance to Storage:	0.00 miles

**Fertilizer Recommendation (lbs/acre)**

Crop	Yield Goal	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Cool season grass pasture	2.40000009536743 ton	95	5	10

This fertilizer recommendation has not been adjusted for any applications of manure or fertilizer.

**Manure Management**

	Application 1	Application 2		
Application Time	Aug 2021	May 2022		
Manure Source	Gestation	Gestation		
Application Rate	5,800 gal/a	4,700 gal/a		
Acres Covered	116.1	116.1		
Total Applied	673,380 gal	545,670 gal		
Loads per Field	0.0	0.0		
Placement	Injected	Injected		
N (lbs/acres)	96	78		
P <sub>2</sub> O <sub>5</sub> (lbs/acre)	145	118		
K <sub>2</sub> O (lbs/acre)	235	191		

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**Crop Management**

\* Cool season grass pasture - For cool season grass pasture and bluegrass pasture split nitrogen applications between late spring after first grazing and mid August, applying 60% before the season of greatest need.

Summary Tables - 8/2021 - 7/2022

F. Manure Summary: 8/2021 - 7/2022

	Source 1	Source 2		
Source	Gestation	GDU		
Units	gals	gals		
Beginning of Year Inventory	5,248,618	401,952		
<b>Inputs</b>				
Production	3,984,872	530,368		
Imports - off farm	0	0		
Transfers - on farm	0	0		
Total Inputs	3,984,872	530,368		
<b>Outputs</b>				
Land Applied	3,621,830	560,310		
Exports - off farm	0	0		
Transfers - on farm	0	0		
Total Outputs	3,621,830	560,310		
End of Year Inventory	5,611,660	372,010		

G. Land Applied Nutrient Summary: 8/2021 - 7/2022

	Total Applied		PAN <sup>1</sup>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Manure Source</b>	(tons or gals)		-----lbs-----		
Gestation	3,621,830	gals	59,867	90,741	147,068
GDU	560,310	gals	21,595	23,542	14,067
<b>Manure Total</b>			81,462	114,283	161,135
	Total Applied		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<b>Fertilizer Source</b>	(lbs or gals)		-----lbs-----		
<b>Fertilizer Total</b>			0	0	0
<b>Total</b>			81,462	114,283	161,135

### H. Lime Recommendations

These lime recommendations are one-time applications meant to be applied only once to adjust soil pH to its desired level. If you have already applied the recommended lime rate in a previous year of this plan please disregard these recommendations.

#### Lime Recommendations<sup>1</sup>

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs ENM/acre <sup>4</sup>
MO602419P1300		14.4	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602419P4000		112.2	2012	6.9	5.8	Medium	302	High	1,780	0 [D]
MO602420P3400		30.9	2015	6.5	5.9	Medium	1,306	High	1,565	0 [D]
MO602420P4000		108.8	2015	6.5	5.7	Medium	1,358	High	1,765	0 [D]
MO602421P3500B		25.2	2015	6.4	5.7	Medium	1,334	High	1,740	0 [D]
MO602421P3500C		19.8	2015	6.4	5.6	Medium	1,238	High	1,815	0 [D]
MO602429P8000B		98.7	2015	6.6	6.1	High	1,522	High	1,295	0 [D]
MO602429P8000C		24.1	2015	6.7	6.4	High	1,562	High	495	0 [D]
MO602429P8000D		186.1	2015	6.7	6.5	High	1,290	High	0	0
MO602430P1150B		6.0	2012	7.1	6.5	High	566	High	0	0
MO602430P1150C		6.9	2015	6.4	5.8	Medium	1,584	High	1,650	0 [D]
MO602430P1400		21.0	2012	7.1	6.5	High	566	High	0	0
		0.0	2012	6.6	5.7	**	652	**	**	**
MO602419P3000B		34.0	2015	6.4	5.8	Medium	1,502	High	1,650	0 [D]
MO602419P3000C		3.9	2015	6.3	5.6	Medium	1,574	High	1,790	0 [D]
MO602419P3000D		3.7	2015	6.3	5.5	Medium	1,370	High	1,850	0 [D]
MO602429P8000E		111.4	2015	6.7	6.3	High	1,506	High	840	0 [D]
MO602430P4200		11.3	2015		7.0	*	842	*	*	*

Field ID	Field SubID	Field Size	Test Year	NA <sup>2</sup>	pH	pH Rating	Mg (lbs/a)	Mg Rating	Lime Rec. lbs ENM/acre <sup>3</sup>	Mg Rec. lbs EMg/acre <sup>4</sup>
MO602430P4300		17.1	2015		7.0	*	835	*	*	*
MO602430P4400		35.6	2015	6.7	6.2	High	1,324	High	1,105	0 [D]
MO602524P4600		53.7	2016	6.7	6.6	High	888	High	0	0
MO602525P1500B		19.5	2016	6.5	5.8	Medium	1,018	High	1,675	0 [D]
MO602525P1500C		34.8	2016	6.6	6.1	High	1,158	High	1,295	0 [D]
MO602429P8000F		23.1	2016	6.7	6.3	High	1,192	High	840	0 [D]
MO652003P4800B		11.5	2015		7.8	*	318	*	*	*
MO652003P4800C		28.6	2015		7.8	*	318	*	*	*
MO652003P4800D		26.1	2016	6.7	6.3	High	852	High	0	0
MO652010P1000B		5.8	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000C		23.5	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000D		16.6	2015	6.7	6.0	Medium	664	High	1,480	0 [D]
MO652010P1000E		37.1	2016	6.7	6.5	High	940	High	0	0
MO652010P1200B		35.8	2015	6.7	6.2	High	774	High	1,105	0 [D]
MO652010P1200C		18.7	2015	6.7	6.1	High	720	High	1,315	0 [D]
MO652010P2100		24.7	2015	6.7	6.1	High	878	High	1,315	0 [D]
MO652010P2500		121.7	2016		7.1	*	389	*	*	*

<sup>1</sup>These lime recommendations assume you used the University of Missouri soil testing laboratory, or comparable lab.

<sup>2</sup>NA = Neutralizable Acidity, units in meq/100g soil.

<sup>3</sup>ENM = Effective Neutralizing Material.

<sup>4</sup>EMg = Effective Magnesium.

\*\* - No recommendation: No crop has been selected for this field in order to calculate lime recommendation.

\* - No recommendation: Some soil test data is missing for this field. Please run the Essential Data Detection Tool.

[D] To determine limestone needed in tons/acre, divide your ENM requirement by the guarantee of your limestone dealer.

I. Crop Record Keeping Table: 8/2021 - 7/2022

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
MO602419P 1300		Corn grain					
MO602419P 4000		Corn grain					
MO602420P 3400		Corn grain					
MO602420P 4000		Soybeans					
MO602421P 3500B		Corn grain					
MO602421P 3500C		Corn grain					
MO602429P 8000B		Corn grain					
MO602429P 8000C		Soybeans					
MO602429P 8000D		Soybeans					
MO602430P 1150B		Corn grain					
MO602430P 1150C		Corn grain					
MO602430P 1400		Corn grain					
MO602419P 3000B		Corn grain					
MO602419P 3000C		Corn grain					
MO602419P 3000D		Corn grain					
MO602429P		Soybeans					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
8000E							
MO602430P 4200		Soybeans					
MO602430P 4300		Soybeans					
MO602430P 4400		Corn grain					
MO602524P 4600		Soybeans					
MO602525P 1500B		Soybeans					
MO602525P 1500C		Soybeans					
MO602429P 8000F		Soybeans					
MO652003P 4800B		Soybeans					
MO652003P 4800C		Corn grain					
MO652003P 4800D		Cool season grass pasture					
MO652010P 1000B		Corn grain					
MO652010P 1000C		Soybeans					
MO652010P 1000D		Soybeans					
MO652010P 1000E		Cool season grass pasture					
MO652010P 1200B		Corn grain					
MO652010P		Soybeans					

Field ID	Field SubID	Crop	Planting Date	Hybrid or Variety	Seeding Rate	Harvest date(s)	Yield/A
1200C							
MO652010P 2100		Soybeans					
MO652010P 2500		Cool season grass pasture					

## Document Source Information

Report based on information from Manure Management Planer (MMP 0.3.3.2)

### Plan:

File: S:\Manure ground\MMP P Index Plans\Trenton Farms RE, LLC\2016 Permit Application materials\Original MMP 2016.1.mmp  
Initialized: 11/6/2008  
Last Saved: 5/20/2016 4:30:49 PM  
Exported: 5/20/2016 4:31:11 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2017  
Plan Start Month: 8

### Operation:

Name: Trenton Farms RE, LLC

### Operation Contact:

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)



## RUSLE2 Profile Erosion Calculation Record

Info: MO602419P1300

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\30214 Vigar loam, 2 to 5 percent slopes, rarely flooded\Vigar loam 95%

Slope length (horiz): 130 ft

Avg. slope steepness: 4.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 3.6 t/ac/yr

Detachment on slope: 3.6 t/ac/yr

Soil loss for cons. plan: 3.6 t/ac/yr

Sediment delivery: 3.6 t/ac/yr

Crit. slope length: 130 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602419P4000

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36042 Vesser silt loam, 0 to 2 percent slopes, occasionally flooded\Vesser silt loam 90%

Slope length (horiz): 120 ft

Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 120 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

Phosphorus Index Worksheet  
Version 0.2 April 20, 2005

County	MO602419P1300 Grundy	MO602419P4000 Grundy	MO602419P4000 Grundy
Soil test P level Units	13 ppm	10.1 ppm	17.5 ppm
Extraction Procedure	Bray-I	Bray-I	Bray-I
Sampling depth	6 to 8 inches	6 to 8 inches	6 to 8 inches
Tillage	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	3.6	1.3	1.3
Land cover	Row crop - straight row	Row crop - straight row	Row crop - straight row
Hydrologic soil group	C	C	C
Hydrologic condition	Good	Good	Good
Distance from center of field to water feature	2370	1330.6	1330.6
Particulate P value	2.0	0.9	0.9
Soluble P value	0.2	0.2	0.2
Total P value	2.2	1.1	1.1
P index rating	LOW	LOW	LOW
Agronomic P rating (Opt. = 45 lbs/a)	MEDIUM	LOW	LOW
Sensitivity value	2.6	2.2	2.2

## RUSLE2 Profile Erosion Calculation Record

Info: MO602419P3000B

File: profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\30175 Pershing silty clay loam, 2 to 5 percent slopes, eroded\Pershing silty clay loam 100%

Slope length (horiz): 210 ft

Avg. slope steepness: 4.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

bsurface drainage: (none)

adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 5.5 t/ac/yr

Detachment on slope: 5.5 t/ac/yr

Soil loss for cons. plan: 5.5 t/ac/yr

Sediment delivery: 5.5 t/ac/yr

Crit. slope length: 210 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602419P3000C

File: profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\30167 Pershing silt loam, 2 to 5 percent slopes\Pershing silt loam 90%

Slope length (horiz): 210 ft

Avg. slope steepness: 4.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 9.1 t/ac/yr

Detachment on slope: 9.1 t/ac/yr

Soil loss for cons. plan: 9.1 t/ac/yr

Sediment delivery: 9.1 t/ac/yr

Crit. slope length: 210 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

## RUSLE2 Profile Erosion Calculation Record

Info: MO602419P3000D

File: profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\30036 Armstrong loam, 5 to 9 percent slopes\Armstrong loam 95%

Slope length (horiz): 150 ft

Avg. slope steepness: 7.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Just res. burial level: Normal res. burial

**Outputs:**

T value: 3.0 t/ac/yr

Soil loss erod. portion: 10 t/ac/yr

Detachment on slope: 10 t/ac/yr

Soil loss for cons. plan: 10 t/ac/yr

Sediment delivery: 10 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

County	MO602419P3000B Grundy	MO602419P3000C Grundy	MO602419P3000D Grundy
Soil test P level Units	12.3 ppm	11 ppm	11 ppm
Extraction Procedure	Bray-I	Bray-I	Bray-I
Sampling depth	6 to 8 inches	6 to 8 inches	6 to 8 inches
Tillage	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	5.5	9.1	10
Land cover	Row crop - straight row	Row crop - straight row	Row crop - straight row
Hydrologic soil group	D	D	C
Hydrologic condition	Good	Good	Good
Distance from center of field to water feature	662.8	1256.7	109.9
Particulate P value	4.4	6.6	8.9
Soluble P value	0.3	0.2	0.2
Total P value	4.7	6.9	9.1
P index rating	MEDIUM	MEDIUM	HIGH
Agronomic P rating (Opt. = 45 lbs/a)	MEDIUM	LOW	LOW
Sensitivity value	3.7	4.5	5.0
			LOW
			LOW
			1.6



## RUSLE2 Profile Erosion Calculation Record

Info: MO602420P3400

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36042 Vesser silt loam, 0 to 2 percent slopes, occasionally flooded\Vesser silt loam 90%

Slope length (horiz): 120 ft

Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 120 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602420P4000

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36042 Vesser silt loam, 0 to 2 percent slopes, occasionally flooded\Vesser silt loam 90%

Slope length (horiz): 120 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 120 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602421P3500B

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County  
 Soil: Grundy County, Missouri\66004 Dockery silt loam, 0 to 2 percent slopes, frequently flooded\Dockery silt loam 90%  
 Slope length (horiz): 98 ft  
 Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill  
 Strips/barriers: (none)  
 Diversion/terrace, sediment basin: (none)  
 Subsurface drainage: (none)  
 Just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr  
 Soil loss erod. portion: 1.9 t/ac/yr  
 Detachment on slope: 1.9 t/ac/yr  
 Soil loss for cons. plan: 1.9 t/ac/yr  
 Sediment delivery: 1.9 t/ac/yr

Crit. slope length: 98 ft  
 Surf. cover after planting: -- %  
 Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602421P3500C

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\66004 Dockery silt loam, 0 to 2 percent slopes, frequently flooded\Dockery silt loam 90%

Slope length (horiz): 98 ft

Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

†just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.9 t/ac/yr

Detachment on slope: 1.9 t/ac/yr

Soil loss for cons. plan: 1.9 t/ac/yr

Sediment delivery: 1.9 t/ac/yr

Crit. slope length: 98 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk oprn w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk oprn w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

County	MO602420P3400 Grundy	MO602420P4000 Grundy	MO602421P3500B Grundy	MO602421P3500C Grundy
Soil test P level Units	16 ppm	9.8 ppm	12 ppm	4.2 ppm
Extraction Procedure Sampling depth	Bray-I 6 to 8 inches	Bray-I 6 to 8 inches	Bray-I 6 to 8 inches	Bray-I 6 to 8 inches
Tillage	Tilled	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	1.3	1.3	1.9	1.9
Land cover	Row crop - straight row	Row crop - straight row	Row crop - straight row	Row crop - contoured with residue
Hydrologic soil group Hydrologic condition	D Good	D Good	C Good	C Good
Distance from center of field to water feature	558.6	959.9	918	457.8
Particulate P value	1.1	0.9	1.4	1.5
Soluble P value	0.3	0.2	0.2	0.1
Total P value	1.4	1.2	1.6	1.6
P index rating	LOW MEDIUM 2.5	LOW LOW 2.5	LOW MEDIUM 2.4	LOW LOW 2.1



## RUSLE2 Profile Erosion Calculation Record

Info: MO602429P8000B

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36046 Wabash silty clay, 0 to 2 percent slopes, occasionally flooded\Wabash silty clay 85%

Slope length (horiz): 160 ft

Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Ibsurface drainage: (none)

Jjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 0.60 t/ac/yr

Detachment on slope: 0.60 t/ac/yr

Soil loss for cons. plan: 0.60 t/ac/yr

Sediment delivery: 0.60 t/ac/yr

Crit. slope length: 160 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602429P8000C

File: profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\66004 Dockery silt loam, 0 to 2 percent slopes, frequently flooded\Dockery silt loam 90%

Slope length (horiz): 98 ft

Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.9 t/ac/yr

Detachment on slope: 1.9 t/ac/yr

Soil loss for cons. plan: 1.9 t/ac/yr

Sediment delivery: 1.9 t/ac/yr

Crit. slope length: 98 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602429P8000D

File: profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\66004 Dockery silt loam, 0 to 2 percent slopes, frequently flooded\Dockery silt loam 90%

Slope length (horiz): 98 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.9 t/ac/yr

Detachment on slope: 1.9 t/ac/yr

Soil loss for cons. plan: 1.9 t/ac/yr

Sediment delivery: 1.9 t/ac/yr

Crit. slope length: 98 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602429P8000E

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36042 Vesser silt loam, 0 to 2 percent slopes, occasionally flooded\Vesser silt loam 90%

Slope length (horiz): 120 ft

Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 120 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

Phosphorus Index Worksheet  
Version 0.2 April 20, 2005

County	MO602429P8000B Grundy	MO602429P8000C Grundy	MO602429P8000D Grundy	MO602429P8000E Grundy
Soil test P level Units	2.4 ppm	7.5 ppm	21.9 ppm	4.8 ppm
Extraction Procedure	Bray-I	Bray-I	Bray-I	Bray-I
Sampling depth	6 to 8 inches			
Tillage	Tilled	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	0.6	1.9	1.9	1.3
Land cover	Row crop - straight row	Row crop - straight row	Row crop - straight row	Row crop - contoured with residue
Hydrologic soil group	D	C	C	C
Hydrologic condition	Good	Good	Good	Good
Distance from center of field to water feature	1790.3	285.1	384.2	1676.5
Particulate P value	0.4	1.7	1.7	0.8
Soluble P value	0.1	0.1	0.4	0.1
Total P value	0.4	1.8	2.1	0.9
P index rating	LOW	LOW	LOW	LOW
Agronomic P rating (Opt. = 45 lbs/a)	LOW	LOW	MEDIUM	LOW
Sensitivity value	2.3	2.5	2.4	1.9



## RUSLE2 Profile Erosion Calculation Record

Info: MO602430P1150B

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County  
 Soil: Grundy County, Missouri\36013 Fatima silt loam, 0 to 2 percent slopes, occasionally flooded\Fatima silt loam 90%  
 Slope length (horiz): 160 ft  
 Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill  
 Strips/barriers: (none)  
 Diversion/terrace, sediment basin: (none)  
 Subsurface drainage: (none)  
 †just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr  
 Soil loss erod. portion: 1.4 t/ac/yr  
 Detachment on slope: 1.4 t/ac/yr  
 Soil loss for cons. plan: 1.4 t/ac/yr  
 Sediment delivery: 1.4 t/ac/yr

Crit. slope length: 160 ft  
 Surf. cover after planting: -- %  
 Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

MO602430P1150B

County	Grundy	Grundy	Grundy
Soil test P level Units	13 ppm	0 ppm	0 ppm
Extraction Procedure	Bray-1	Bray-1	Bray-1
Sampling depth	6 to 8 inches	6 to 8 inches	6 to 8 inches
Tillage	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	1.4	0	0
Land cover	Row crop - straight row	Row crop - straight row	Row crop - contoured with residue
Hydrologic soil group	B	C	C
Hydrologic condition	Good	Good	Good
Distance from center of field to water feature	311.2	0	0
Particulate P value	0.9	0.0	0.0
Soluble P value	0.2	0.0	0.0
Total P value	1.0	0.0	0.0
P index rating	LOW	LOW	LOW
Agronomic P rating (Opt.= 45 lbs/a)	MEDIUM	LOW	LOW
Sensitivity value	1.7	1.9	1.6



## RUSLE2 Profile Erosion Calculation Record

Info: MO602430P1150C

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36050 Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded\Zook silty clay loam 90%

Slope length (horiz): 120 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

.b surface drainage: (none)

.j just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.1 t/ac/yr

Detachment on slope: 1.1 t/ac/yr

Soil loss for cons. plan: 1.1 t/ac/yr

Sediment delivery: 1.1 t/ac/yr

Crit. slope length: 120 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602430P1400

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36042 Vesser silt loam, 0 to 2 percent slopes, occasionally flooded\Vesser silt loam 90%

Slope length (horiz): 120 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 120 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

Phosphorus Index Worksheet  
Version 0.2 April 20, 2005

	MO602430P1150C Grundy	MO602430P1400 Grundy	Grundy
County			
Soil test P level Units	14 ppm	11 ppm	0 ppm
Extraction Procedure	Bray-I	Bray-I	Bray-I
Sampling depth	6 to 8 inches	6 to 8 inches	6 to 8 inches
Tillage	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	1.1	1.3	0
Land cover	Row crop - straight row	Row crop - straight row	Row crop - contoured with residue
Hydrologic soil group	C	C	C
Hydrologic condition	Good	Good	Good
Distance from center of field to water feature	182.9	1286.5	0
Particulate P value	1.0	0.9	0.0
Soluble P value	0.3	0.2	0.0
Total P value	1.2	1.2	0.0
P index rating	LOW	LOW	LOW
Agronomic P rating (Opt. = 45 lbs/a)	MEDIUM	LOW	LOW
Sensitivity value	2.2	2.2	1.9
			1.6



## RUSLE2 Profile Erosion Calculation Record

Info: MO602430P4200

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36046 Wabash silty clay, 0 to 2 percent slopes, occasionally flooded\Wabash silty clay 85%

Slope length (horiz): 160 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	43.80G

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 0.60 t/ac/yr

Detachment on slope: 0.60 t/ac/yr

Soil loss for cons. plan: 0.60 t/ac/yr

Sediment delivery: 0.60 t/ac/yr

Crit. slope length: 160 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602430P4300

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\30214 Vigar loam, 2 to 5 percent slopes, rarely flooded\Vigar loam 95%

Slope length (horiz): 130 ft

Avg. slope steepness: 4.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

.djust res. burial level: Normal.res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 3.6 t/ac/yr

Detachment on slope: 3.6 t/ac/yr

Soil loss for cons. plan: 3.6 t/ac/yr

Sediment delivery: 3.6 t/ac/yr

Crit. slope length: 130 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73



## RUSLE2 Profile Erosion Calculation Record

Info: MO602430P4400

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36046 Wabash silty clay, 0 to 2 percent slopes, occasionally flooded\Wabash silty clay 85%

Slope length (horiz): 160 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 0.60 t/ac/yr

Detachment on slope: 0.60 t/ac/yr

Soil loss for cons. plan: 0.60 t/ac/yr

Sediment delivery: 0.60 t/ac/yr

Crit. slope length: 160 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		72
4/10/1	Cultivator, field 6-12 in sweeps		40
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain	38
10/25/1	Harvest, killing crop 50pct standing stubble		73
4/28/2	Chisel, st. pt.		43
4/28/2	Cultivator, field 6-12 in sweeps		43
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	45
10/20/2	Harvest, killing crop 30pct standing stubble		73

MO602430P4200 Grundy MO602430P4300 Grundy MO602430P4400 Grundy

County	MO602430P4200 Grundy	MO602430P4300 Grundy	MO602430P4400 Grundy
Soil test P level Units	14 ppm	16 ppm	2.5 ppm
Extraction Procedure	Bray-I	Bray-I	Bray-I
Sampling depth	6 to 8 inches	6 to 8 inches	6 to 8 inches
Tillage	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	0.6	3.6	0.6
Land cover	Row crop - straight row	Row crop - straight row	Row crop - straight row
Hydrologic soil group	D	C	D
Hydrologic condition	Good	Good	Good
Distance from center of field to water feature	432.2	344.9	344.9
Particulate P value	0.5	3.1	0.5
Soluble P value	0.3	0.3	0.1
Total P value	0.8	3.4	0.5
P index rating	LOW	MEDIUM	LOW
Agronomic P rating (Opt. = 45 lbs/a)	MEDIUM	MEDIUM	LOW
Sensitivity value	2.3	2.9	2.3
			1.6



## RUSLE2 Profile Erosion Calculation Record

Info: MO602524P4600

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\36050 Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded\Zook silty clay loam 90%

Slope length (horiz): 120 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain, high yield	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Inversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.1 t/ac/yr

Detachment on slope: 1.1 t/ac/yr

Soil loss for cons. plan: 1.1 t/ac/yr

Sediment delivery: 1.1 t/ac/yr

Crit. slope length: 120 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		73
4/10/1	Cultivator, field 6-12 in sweeps		41
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	38
10/25/1	Harvest, killing crop 50pct standing stubble		74
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		49
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	51
10/20/2	Harvest, killing crop 30pct standing stubble		74

## RUSLE2 Profile Erosion Calculation Record

Info: MO602525P1500B

**File:** profiles/default

**Inputs:**

Location: USA\Missouri\Grundy County

Soil: Grundy County, Missouri\30054 Gara clay loam, 9 to 14 percent slopes, eroded\Gara clay loam 90%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain, high yield	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

bsurface drainage: (none)

djust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 11 t/ac/yr

Detachment on slope: 11 t/ac/yr

Soil loss for cons. plan: 11 t/ac/yr

Sediment delivery: 11 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		73
4/10/1	Cultivator, field 6-12 in sweeps		41
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	38
10/25/1	Harvest, killing crop 50pct standing stubble		74
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		49
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	51
10/20/2	Harvest, killing crop 30pct standing stubble		74

## RUSLE2 Profile Erosion Calculation Record

Info: MO602525P1500C

**File:** profiles\default

**Inputs:**

Location: USAMissouri\Grundy County

Soil: Grundy County, Missouri\30054 Gara clay loam, 9 to 14 percent slopes, eroded\Gara clay loam 90%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records*\*CB South	vegetations\Corn, grain, high yield	bushels	122.14
managements\CMZ 04\c.Other Local Mgt Records*\*CB South	vegetations\Soybean, mw 30 in rows	bu	43.800

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

  ubsurface drainage: (none)

  djust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 11 t/ac/yr

Detachment on slope: 11 t/ac/yr

Soil loss for cons. plan: 11 t/ac/yr

Sediment delivery: 11 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		73
4/10/1	Cultivator, field 6-12 in sweeps		41
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	38
10/25/1	Harvest, killing crop 50pct standing stubble		74
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		49
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	51
10/20/2	Harvest, killing crop 30pct standing stubble		74

County	MO602524P4600 Grundy	MO602525P1500B Grundy	MO602525P1500C Grundy	Scotland
Soil test P level Units	17 ppm	22 ppm	16.5 ppm	0 ppm
Extraction Procedure Sampling depth	Bray-I 6 to 8 inches	Bray-I 6 to 8 inches	Bray-I 6 to 8 inches	Mehlich-III 6 to 8 inches
Tillage	Tilled	Tilled	Tilled	Tilled
RUSLE value - average annual (tons/ac)	1.1	11	11	0
Land cover	Row crop - straight row	Row crop - straight row	Row crop - straight row	Row crop - contoured with residue
Hydrologic soil group Hydrologic condition	C Good	C Good	C Good	C Good
Distance from center of field to water feature	524.3	832.3	845	0
Particulate P value	0.9	8.6	8.3	0.0
Soluble P value	0.3	0.4	0.3	0.0
Total P value	1.2	9.0	8.6	0.0
P index rating	LOW	HIGH	HIGH	LOW
Agronomic P rating (Opt. = 45 lbs/a)	MEDIUM	MEDIUM	MEDIUM	Non-agronomic test for MO
Sensitivity value	2.2	4.8	4.7	1.6

## RUSLE2 Profile Erosion Calculation Record

Info: MO652003P4800B

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\36031 Nodaway silt loam, 0 to 2 percent slopes, frequently flooded\Nodaway silt loam 85%

Slope length (horiz): 95 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

iversion/terrace, sediment basin: (none)

bsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.5 t/ac/yr

Detachment on slope: 1.5 t/ac/yr

Soil loss for cons. plan: 1.5 t/ac/yr

Sediment delivery: 1.5 t/ac/yr

Crit. slope length: 95 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72

## RUSLE2 Profile Erosion Calculation Record

Info: MO652003P4800C

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\36009 Colo silt loam, 0 to 2 percent slopes, frequently flooded\Colo silt loam 90%

Slope length (horiz): 90 ft

Avg. slope steepness: 1.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 90 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72



## RUSLE2 Profile Erosion Calculation Record

Info: MO652003P4800D

File: profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\30058 Gara loam, 14 to 20 percent slopes, eroded\Gara loam 90%

Slope length (horiz): 93 ft

Avg. slope steepness: 16 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 0.14 t/ac/yr

Detachment on slope: 0.14 t/ac/yr

Soil loss for cons. plan: 0.14 t/ac/yr

Sediment delivery: 0.14 t/ac/yr

Crit. slope length: 93 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 5000 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
5/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	49
6/15/0	Manure injector, liquid low disturb.30 inch		62
20/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	55

7/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	47
9/15/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	46
11/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	46

## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P1000B

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\30245 Vigar-Zook-Nodaway complex, 2 to 5 percent slopes\Vigar loam 38%

Slope length (horiz): 160 ft

Avg. slope steepness: 3.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 2.8 t/ac/yr

Detachment on slope: 2.8 t/ac/yr

Soil loss for cons. plan: 2.8 t/ac/yr

Sediment delivery: 2.8 t/ac/yr

Crit. slope length: 160 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72

County	MO652003P4800B Putnam	MO652003P4800C Putnam	MO652003P4800D Putnam	MO652010P1000B Putnam
Soil test P level Units	18 ppm	18 ppm	8 ppm	16 ppm
Extraction Procedure Sampling depth	Bray-1 6 to 8 inches			
Tillage	Tilled	Tilled	NoTill or Forage	Tilled
RUSLE value - average annual (tons/ac)	1.5	1.3	0.14	2.8
Land cover	Row crop - straight row	Row crop - straight row	Pasture	Row crop - straight row
Hydrologic soil group Hydrologic condition	B Good	C Good	C Good	C Good
Distance from center of field to water feature	247.7	709.6	120.5	60.1
Particulate P value	1.0	1.1	0.1	2.5
Soluble P value	0.3	0.3	0.3	0.3
Total P value	1.3	1.4	0.4	2.8
P index rating Agronomic P rating (Opt. = 45 lbs/a) Sensitivity value	LOW MEDIUM 1.8	LOW MEDIUM 2.3	LOW LOW 1.2	LOW MEDIUM 2.8



## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P1000C

**File:** profiles\default

**Inputs:**

Location: USAMissouri\Putnam County

Soil: Putnam County, Missouri\30216 Vigar silt loam, 2 to 9 percent slopes, rarely flooded\Vigar silt loam 90%

Slope length (horiz): 90 ft

Avg. slope steepness: 6.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

    ubsurface drainage: (none)

    djust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 6.2 t/ac/yr

Detachment on slope: 6.2 t/ac/yr

Soil loss for cons. plan: 6.2 t/ac/yr

Sediment delivery: 6.2 t/ac/yr

Crit. slope length: 90 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72



## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P1000D

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\30216 Vigar silt loam, 2 to 9 percent slopes, rarely flooded\Vigar silt loam 90%

Slope length (horiz): 90 ft

Avg. slope steepness: 6.0 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

.jbsurface drainage: (none)

.djust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 6.2 t/ac/yr

Detachment on slope: 6.2 t/ac/yr

Soil loss for cons. plan: 6.2 t/ac/yr

Sediment delivery: 6.2 t/ac/yr

Crit. slope length: 90 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72

## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P1000E

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\30058 Gara loam, 14 to 20 percent slopes, eroded\Gara loam 90%

Slope length (horiz): 93 ft

Avg. slope steepness: 16 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 0.14 t/ac/yr

Detachment on slope: 0.14 t/ac/yr

Soil loss for cons. plan: 0.14 t/ac/yr

Sediment delivery: 0.14 t/ac/yr

Crit. slope length: 93 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 5000 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
5/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	49
6/15/0	Manure injector, liquid low disturb.30 inch		62
'20/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	55

7/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	47
9/15/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	46
11/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	46



## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P1200B

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\36009 Colo silt loam, 0 to 2 percent slopes, frequently flooded\Colo silt loam 90%

Slope length (horiz): 90 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 90 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72

County	MO652010P1000C	MO652010P1000D	MO652010P1000E	MO652010P1200B
	Putnam	Putnam	Putnam	Putnam
Soil test P level Units	16 ppm	16 ppm	44 ppm	27 ppm
Extraction Procedure Sampling depth	Bray-I 6 to 8 inches			
Tillage	Tilled	Tilled	Notill or Forage	Tilled
RUSLE value - average annual (tons/ac)	6.2	6.2	0.14	1.3
Land cover	Row crop - straight row	Row crop - straight row	Pasture	Row crop - straight row
Hydrologic soil group	C	C	C	C
Hydrologic condition	Good	Good	Good	Good
Distance from center of field to water feature	291.3	305.6	329.1	478.2
Particulate P value	5.6	5.3	0.2	1.1
Soluble P value	0.3	0.3	1.5	0.5
Total P value	5.9	5.6	1.7	1.6
P index rating	MEDIUM	MEDIUM	LOW	LOW
Agonomic P rating (Opt. = 45 lbs/a)	MEDIUM	MEDIUM	VERY HIGH	HIGH
Sensitivity value	3.8	3.7	1.2	2.3



## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P1200C

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\36009 Colo silt loam, 0 to 2 percent slopes, frequently flooded\Colo silt loam 90%

Slope length (horiz): 90 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records\*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Surface drainage: (none)

Just res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.3 t/ac/yr

Detachment on slope: 1.3 t/ac/yr

Soil loss for cons. plan: 1.3 t/ac/yr

Sediment delivery: 1.3 t/ac/yr

Crit. slope length: 90 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72



## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P2100

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\36031 Nodaway silt loam, 0 to 2 percent slopes, frequently flooded\Nodaway silt loam 85%

Slope length (horiz): 95 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain, high yield	bushels	124.30
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	40.130

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Inversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 1.5 t/ac/yr

Detachment on slope: 1.5 t/ac/yr

Soil loss for cons. plan: 1.5 t/ac/yr

Sediment delivery: 1.5 t/ac/yr

Crit. slope length: 95 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		71
4/10/1	Cultivator, field 6-12 in sweeps		42
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	39
10/25/1	Harvest, killing crop 50pct standing stubble		75
11/1/1	Chisel, st. pt.		50
4/28/2	Cultivator, field 6-12 in sweeps		50
5/1/2	Planter, double disk opnr w/fluted coulter	Soybean, mw 30 in rows	52
10/20/2	Harvest, killing crop 30pct standing stubble		72



## RUSLE2 Profile Erosion Calculation Record

Info: MO652010P2500

**File:** profiles\default

**Inputs:**

Location: USA\Missouri\Putnam County

Soil: Putnam County, Missouri\30058 Gara loam, 14 to 20 percent slopes, eroded\Gara loam 90%

Slope length (horiz): 93 ft

Avg. slope steepness: 16 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i># yield units, #/ac</i>
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000
managements\CMZ 04\c.Other Local Mgt Records\*Pasture	vegetations\Grass, cool season pasture, regrowth after grazing	ton	1.0000

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 0.14 t/ac/yr

Detachment on slope: 0.14 t/ac/yr

Soil loss for cons. plan: 0.14 t/ac/yr

Sediment delivery: 0.14 t/ac/yr

Crit. slope length: 93 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 5000 lb/ac

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
5/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	49
6/15/0	Manure injector, liquid low disturb.30 inch		62
'20/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	55

/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	47
9/15/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	46
11/1/0	Graze, rotational	Grass, cool season pasture, regrowth after grazing	46



**Quick Stats**

[Home](#) [Recent Statistics](#) [Developers](#) [Help](#)

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2012	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	60.5	
SURVEY	2011	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	131.6	
SURVEY	2010	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	109.1	
SURVEY	2009	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	137	
SURVEY	2008	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	117	

*Avg. = 111*

*Avg. +10% = 122.14*

Quick Stats

Home Reports Statistics Developers Help

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2014	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	44.4	
SURVEY	2012	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	27.7	
SURVEY	2011	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	44.3	
SURVEY	2010	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	40.2	
SURVEY	2009	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	42.5	

Avg. = 39.8

Avg. +10% = 43.8

## Quick Stats

Home

Recent Statistics

Developers

Help

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2008	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	1.95	
SURVEY	2007	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	1.68	
SURVEY	2006	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	1.67	
SURVEY	2005	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	1.73	
SURVEY	2004	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	GRUNDY	079			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	2.04	

$Avg. = 1.81$   
 $Avg + 10\% = \del{1.99}$   
 2.00

**Quick Stats**

[Home](#) [Recent Statistics](#) [Developers](#) [Help](#)

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2015	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	141.4	
SURVEY	2012	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	65.6	
SURVEY	2011	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	116	
SURVEY	2010	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	93	
SURVEY	2009	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	149	

*Avg. = 113*  
*+10% = 124.3*

Quick Stats

Home Recent Statistics Developers Help

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2015	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	37.7	
SURVEY	2014	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	46.3	
SURVEY	2013	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	30.1	
SURVEY	2012	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	25.5	
SURVEY	2011	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	42.8	

Avg. = 36.48  
+ 10% = 40.13



United States Department of Agriculture  
National Agricultural Statistics Service



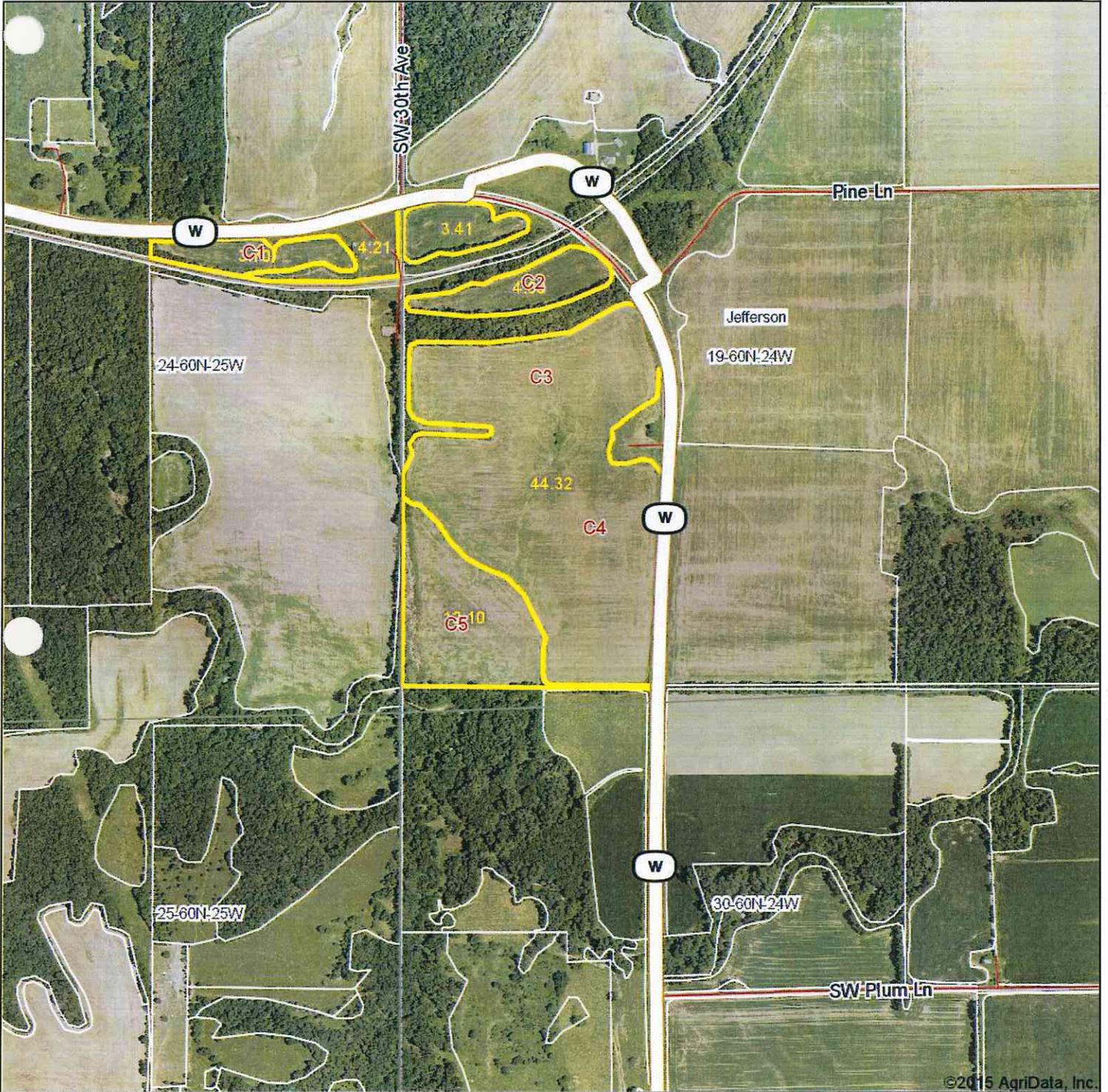
Quick Stats

- Home
- Recent Statistics
- Developers
- Help

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2008	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	2.45	
SURVEY	2007	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	2.25	
SURVEY	2006	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	1.96	
SURVEY	2005	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	1.86	
SURVEY	2004	YEAR		COUNTY	MISSOURI	29	NORTH CENTRAL	20	PUTNAM	171			00000000		HAY	HAY - YIELD, MEASURED IN TONS / ACRE	TOTAL	NOT SPECIFIED	2.48	

Avg = 2.2  
Avg + 10% Yield  
Goal = 2.42

# Aerial Map



©2015 AgriData, Inc.

United Farmers Mercantile Cooperative

**UFMC**  
United to Serve You Better

Maps Provided By:



© AgriData, Inc. 2014 www.AgriDataInc.com

19-60N-24W  
Grundy County  
Missouri

P3000B = 12.3  
P3000C = 11  
P3000D = 11

map center: 39.993536, -93.648094

scale: 9577



6/1/2015

REPORT NUMBER

15-146-0084

ACCOUNT

9169

COMPLETED DATE

May 28, 2015

RECEIVED DATE

May 26, 2015



**Midwest Laboratories Inc.**

13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121  
www.midwestlabs.com

IDENTIFICATION

UNITED FARMERS MERCANTILE COOP DON DAVIS

BRUCE STREICHER

203 W OAK

RED OAK IA 51566

501 EAST PROSPECT ST

RED OAK IOWA 51566

PAGE 1/1

TODAY'S DATE

May 28, 2015

**SOIL ANALYSIS REPORT**

INFO SHEET: 719257

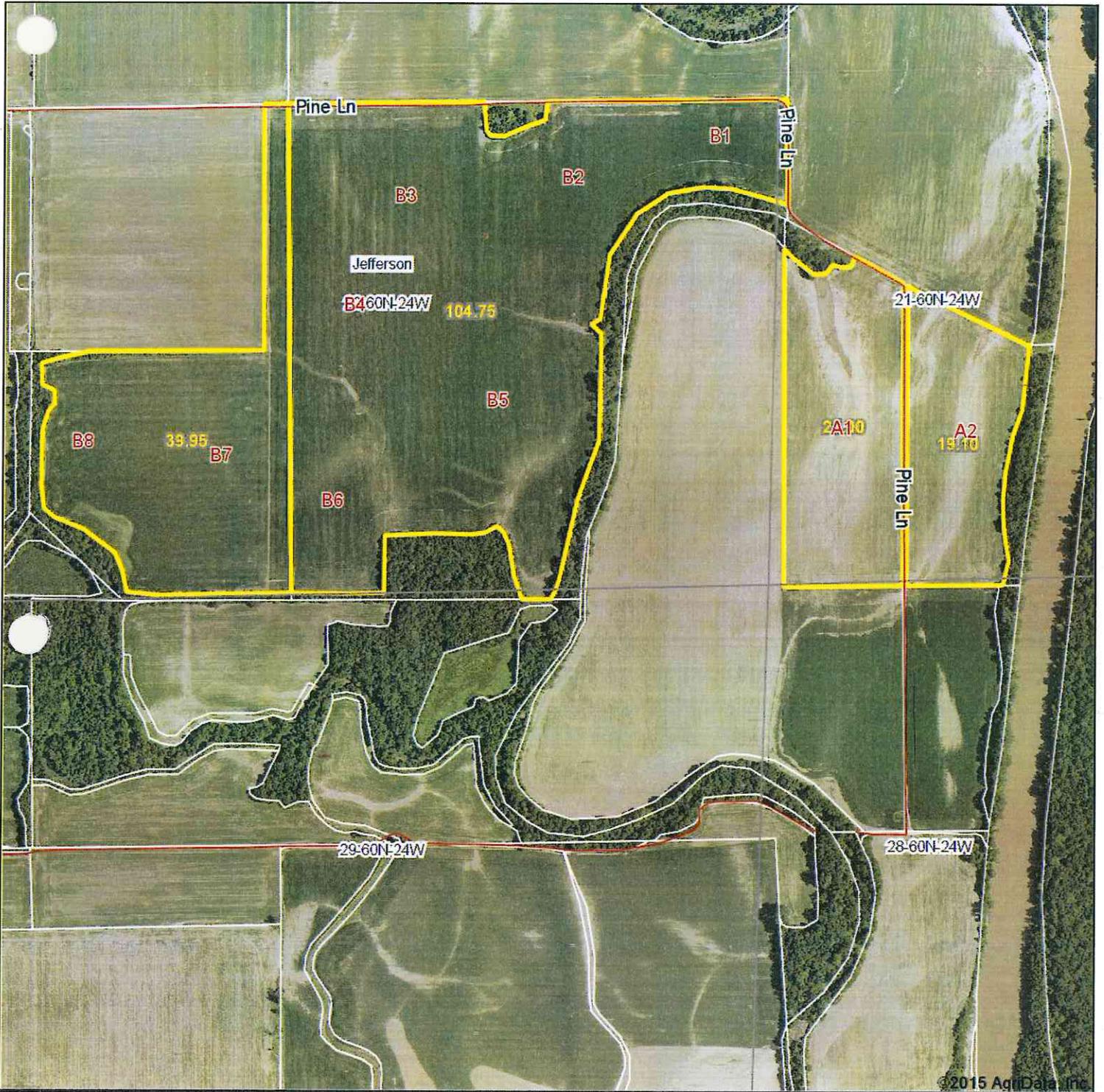
LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER L.O.I. percent RATE	PHOSPHORUS		POTASSIUM		MAGNESIUM		CALCIUM		SODIUM		pH	BUFFER INDEX	CATION EXCHANGE CAPACITY CEC meq/100g	PERCENT BASE SATURATION (COMPUTED)			
			P (VIEW) 1:7 ppm RATE	P (STRONG BRAY) 1:7 ppm RATE	P (OLSEN) BICARBONATE ppm RATE	K ppm RATE	Mg ppm RATE	Ca ppm RATE	Na ppm RATE	% K	% Mg	% Ca				% H	% Na		
60561	C1	2.9 M	11 L	21 M	11 M	196 M	685 VH	2943 M					5.5	6.3	28.3	1.8	20.2	52.0	26.0
60562	C2	3.3 M	11 L	17 L	5 VL	245 M	787 VH	3358 M					5.6	6.3	31.4	2.0	20.9	53.5	23.6
60563	C3	3.0 M	12 L	21 M	11 M	238 M	823 VH	3449 M					6.0	6.5	29.1	2.1	23.6	59.3	15.0
60564	C4	3.0 M	13 L	21 M	9 L	187 M	697 VH	2957 M					5.7	6.4	26.7	1.8	21.8	55.4	21.0
60565	C5	2.8 M	12 L	21 M	8 L	205 M	733 VH	3043 M					5.6	6.4	28.5	1.8	21.4	53.4	23.4

LAB NUMBER	SURFACE		SUBSOIL 1		SUBSOIL 2		NITRATE-N (FIA)		SULFUR S FCAP ppm RATE	ZINC Zn DTPA ppm RATE	MANGANESE Mn DTPA ppm RATE	IRON Fe DTPA ppm RATE	COPPER Cu DTPA ppm RATE	BORON B SORB. DTPA ppm RATE	EXCESS LIME RATE	SOLUBLE SALTS ppm/oz/1.3 cm. RATE
	ppm	lbz/A	depth (in)	lbz/A	depth (in)	ppm	lbz/A	Total lbz/A								
*281*																
60561			0-6													
60562			0-6													
60563			0-6													
60564			0-6													
60565			0-6													

REV. 12/03

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

# Aerial Map



©2015 AgriData, Inc.

United Farmers Mercantile Cooperative

**UFMC**  
*"United to Serve You Better"*

Maps Provided By:



20-60N-24W  
Grundy County  
Missouri

P 3500B = 12  
P 3500C = 42  
P 4000 = 9.8  
P 3400 = 16

map center: 39.992568, -93.622009

scale: 9590



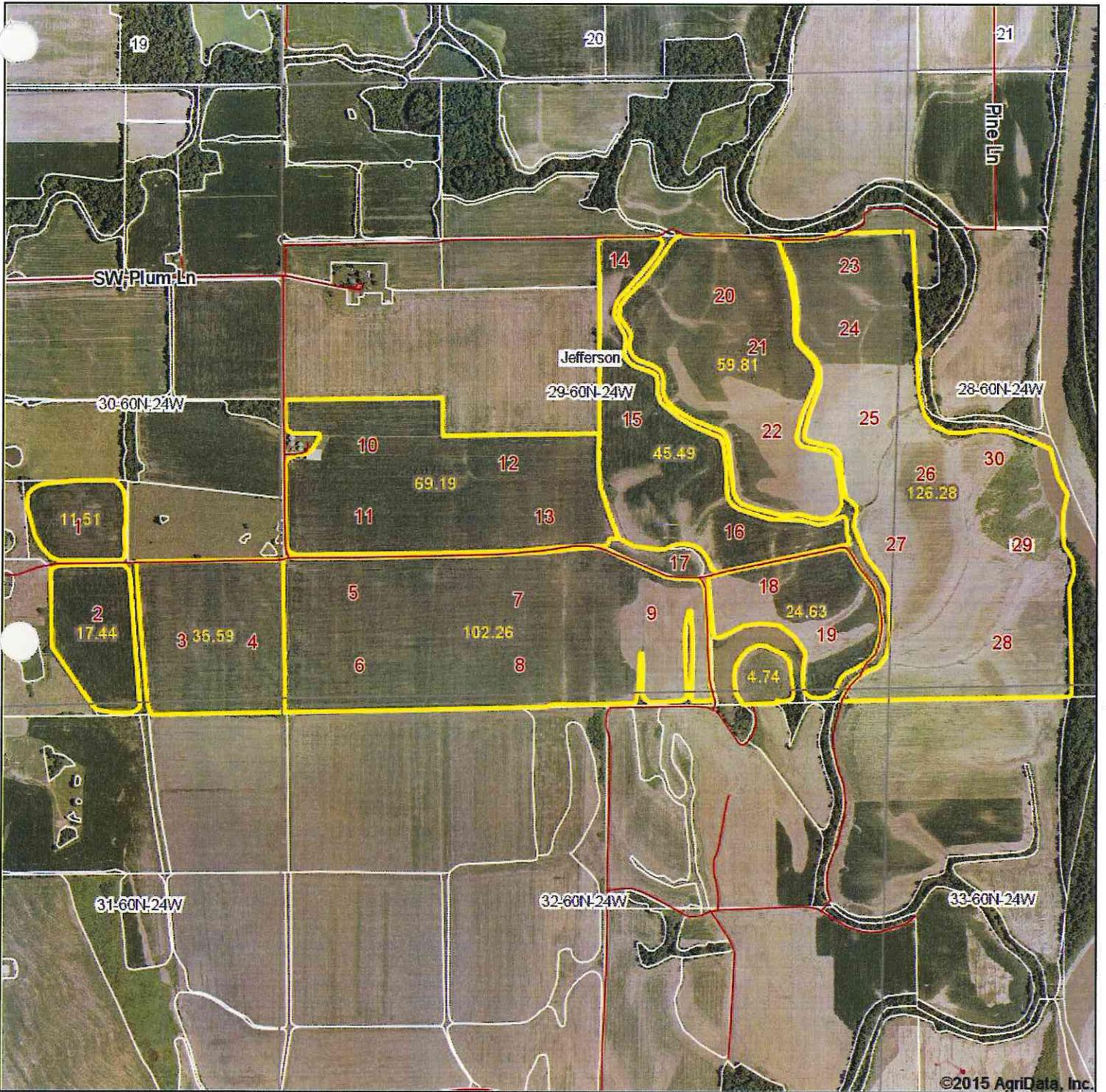
6/1/2015

Field borders provided by Farm Service Agency as of 5/21/2008.





# Aerial Map



United Farmers Mercantile Cooperative

**UFMC**  
United To Serve You Better

Maps Provided By:

**surety**  
CUSTOMIZED ONLINE MAPPING  
© AgriData, Inc. 2014 www.AgriDataInc.com

PA200 = 14

PA300 = 15

PA400 = 25

29-60N-24W  
Grundy County  
Missouri

map center: 39.980877, -93.628422

scale: 15151



6/1/2015

PS000B = 2.4

PS000C = 7.5

PS000D = 21.9

PS000E = 4.8



REPORT NUMBER

15-141-0115

COMPLETED DATE

May 27, 2015

RECEIVED DATE

May 21, 2015

ACCOUNT

9169



**Midwest Laboratories Inc.**

13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121  
www.midwestlabs.com

IDENTIFICATION

**UNITED FARMERS MERCANTILE COOP DON DAVIS  
BRUCE STREICHER  
203 W OAK  
RED OAK IA 51566-**

PAGE 2/5

TODAY'S DATE

May 26, 2015

**SOIL ANALYSIS REPORT**

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER L.O.I. percent	PHOSPHORUS		POTASSIUM		MAGNESIUM		CALCIUM		SODIUM		pH	CATION EXCHANGE CAPACITY C.E.C. meq/100g	PERCENT BASE SATURATION (COMPUTED)				
			P (MEQ) 1:7 RATE ppm	P (STRONG) 1:7 RATE ppm	P (WEAK) 1:7 RATE ppm	P (BICARBONATE) ppm	K ppm	Mg ppm	Ca ppm	Na ppm	% K	% Mg			% Ca	% H	% Na		
51471	DAVIS11	2.5 L	2 VL	31 M	4 VL	180 M	732 VH	2690 M	6.1	6.6	23.3	2.0	26.2	57.7	14.1				
51472	DAVIS12	3.0 M	4 VL	5 VL	5 VL	193 M	726 VH	2717 M	6.2	6.7	22.8	2.2	26.5	59.6	11.7				
51473	DAVIS13	2.9 M	2 VL	6 VL	5 VL	208 M	746 VH	2782 M	6.1	6.6	24.1	2.2	25.8	57.7	14.3				
51474	DAVIS14	3.2 M	3 VL	8 L	6 L	201 H	693 VH	2659 M	6.1	6.6	22.8	2.3	25.3	58.3	14.1				
51475	DAVIS15	2.8 M	6 VL	23 M	9 L	221 H	806 VH	2943 M	6.5	6.7	23.8	2.4	28.2	61.8	7.6				
51476	DAVIS16	2.9 M	7 VL	25 M	10 L	198 H	747 VH	2737 M	6.6	6.8	21.7	2.3	28.7	63.1	5.9				
51477	DAVIS17	2.6 M	11 L	30 M	13 M	236 H	818 VH	2992 M	6.5	6.7	24.2	2.5	28.2	61.8	7.5				
51478	DAVIS18	2.9 M	7 VL	20 M	9 L	218 H	776 VH	2828 M	6.3	6.7	23.7	2.4	27.3	59.7	10.6				
51479	DAVIS19	2.9 M	8 L	23 M	7 L	217 H	786 VH	2846 M	6.4	6.7	23.4	2.4	28.0	60.8	8.8				
51481	DAVIS20	3.8 H	9 L	20 M	5 VL	306 VH	704 VH	2873 M	6.6	6.8	22.3	3.5	26.3	64.4	5.8				

LAB NUMBER	SURFACE		SUBSOIL 1		SUBSOIL 2		SULFUR 5 I.C.A.P. ppm	ZINC Zn DTPA ppm	MANGANESE Mn DTPA ppm	IRON Fe DTPA ppm	COPPER Cu DTPA ppm	BORON B SOBH DTPA ppm	EXCESS LIME RATE	SOLUBLE SALTS 1:1 mmol/cv
	ppm	lbs/A	depth (in)	lbs/A	depth (in)	lbs/A								
*281*														
51471			0-6											
51472			0-6											
51473			0-6											
51474			0-6											
51475			0-6											
51476			0-6											
51477			0-6											
51478			0-6											
51479			0-6											
51481			0-6											

REV. 12/03

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

REPORT NUMBER

15-141-0115

COMPLETED DATE  
May 27, 2015

RECEIVED DATE  
May 21, 2015

ACCOUNT  
9169



13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121  
www.midwestlabs.com

**Midwest Laboratories Inc.®**

IDENTIFICATION

UNITED FARMERS MERCANTILE COOPRON DAVIS

BRUCE STREICHER  
203 W OAK  
RED OAK IA 51566-

PAGE 3/5

TODAY'S DATE  
May 26, 2015

**SOIL ANALYSIS REPORT**

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER L.O.I. percent RATE	PHOSPHORUS			POTASSIUM			CALCIUM			SODIUM			pH	SOIL pH 1:1	BUFFER INDEX	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPUTED)						
			P <sub>1</sub> (MEAR) 1:7 ppm RATE	P <sub>1</sub> (STRONG BRAY) 1:7 ppm RATE	P <sub>1</sub> (OLSEN) BICARBONATE ppm RATE	K ppm RATE	Mg ppm RATE	Ca ppm RATE	Na ppm RATE	% K	% Mg	% Ca	% H	% Na											
51482	DAVIS21	3.7 H	11 L	29 M	11 M	297 VH	791 VH	3025 M					6.7	22.5	3.4	29.3	67.3	0.0							
51483	DAVIS22	3.3 M	6 VL	21 M	7 L	253 VH	694 VH	2644 M					6.3	22.0	2.9	26.3	60.1	10.7							
51484	DAVIS23	2.9 M	8 L	27 M	9 L	234 H	734 VH	2718 M					6.3	22.7	2.6	26.9	59.9	10.6							
51485	DAVIS24	2.5 L	14 L	49 H	16 H	222 H	782 VH	2770 M					6.7	20.9	2.7	31.2	66.1	0.0							
51486	DAVIS25	3.2 M	44 VH	84 VH	47 VH	308 VH	548 VH	2741 M					6.5	20.6	3.8	22.2	66.5	7.5							
51487	DAVIS26	3.4 M	45 VH	76 VH	37 VH	357 VH	544 VH	3095 H					6.5	22.6	4.1	20.1	68.5	7.3							
51488	DAVIS27	2.0 L	23 H	58 H	26 VH	251 VH	641 VH	2805 M					6.4	22.0	2.9	24.3	63.8	9.0							
51489	DAVIS28	2.6 M	26 H	43 H	25 VH	303 VH	519 VH	2984 M					6.3	22.3	3.5	19.4	66.9	10.2							
51490	DAVIS29	2.8 M	23 H	33 M	20 H	306 VH	567 VH	3173 H					6.4	23.5	3.3	20.1	67.5	9.1							
51491	DAVIS30	2.8 M	32 VH	56 H	30 VH	319 VH	567 VH	3088 M					6.3	23.5	3.5	20.1	65.7	10.7							

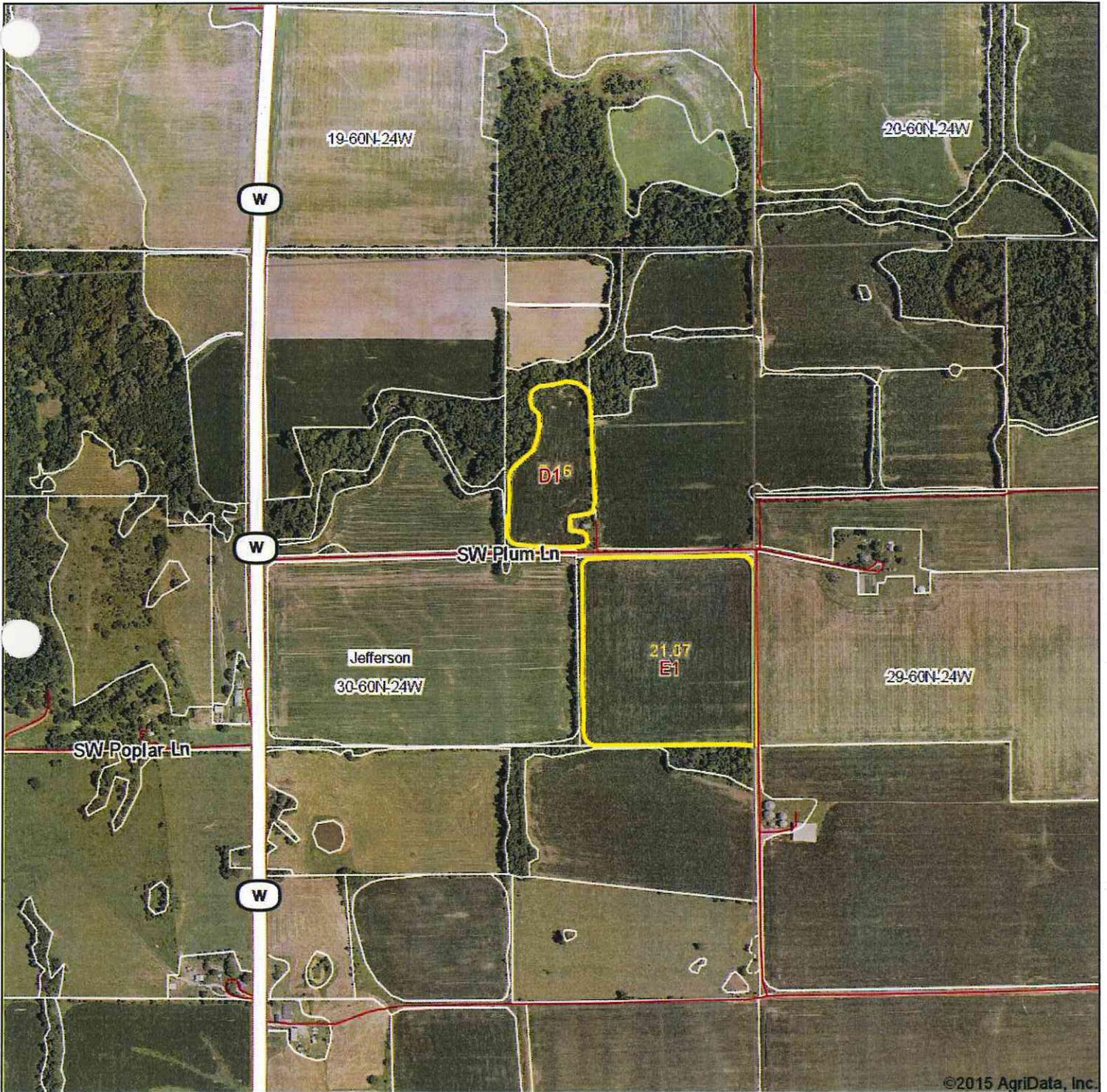
  

LAB NUMBER	SURFACE		SUBSOIL 1		SUBSOIL 2		Total lbs/A
	ppm	depth (in)	lbs/A	depth (in)	lbs/A	depth (in)	
*281*							
51482		0-6					
51483		0-6					
51484		0-6					
51485		0-6					
51486		0-6					
51487		0-6					
51488		0-6					
51489		0-6					
51490		0-6					
51491		0-6					

REV. 1/03

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

# Aerial Map



©2015 AgriData, Inc.

United Farmers Mercantile Cooperative

**UFMC**  
*United To Serve You Better*

Maps Provided By:



© AgriData, Inc. 2014 www.AgriDataInc.com

**30-60N-24W**  
**Grundy County**  
**Missouri**

map center: 39.987148, -93.640446

scale: 9577

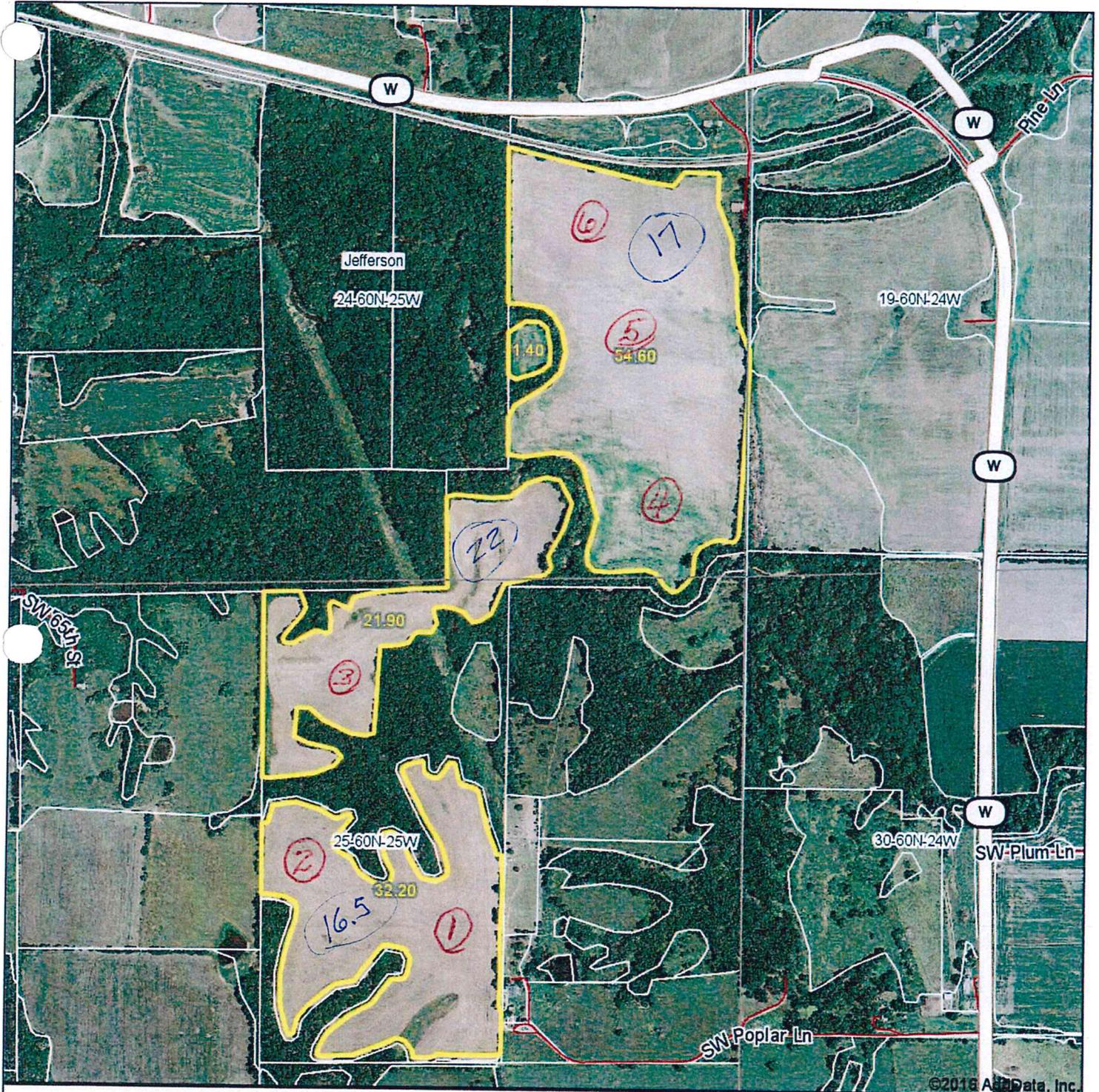


6/1/2015





# Aerial Map



United Farmers Mercantile Cooperative

**UFMC**  
"Think To Serve You Better"

map center: 39.991451, -93.654794

0ft 853ft 1706ft

Maps Provided By:

**surety**  
CUSTOMIZED ONLINE MAPPING  
AgriData, Inc. 2016 www.AgriDataInc.com

**24-60N-25W**  
**Grundy County**  
**Missouri**



3/22/2016

REPORT NUMBER

16-054-0194

COMPLETED DATE

Feb 25, 2016

RECEIVED DATE

Feb 23, 2016

ACCOUNT

9169



LABORATORIES INC.

13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121

www.midwestlabs.com

IDENTIFICATION

UNITED FARMERS MERCANTILE COOP Don Davis

BRUCE STREICHER

203 W OAK

RED OAK IA 51566-

Beaver Creek

PAGE 1/1

TODAY'S DATE

Feb 25, 2016

SOIL ANALYSIS REPORT

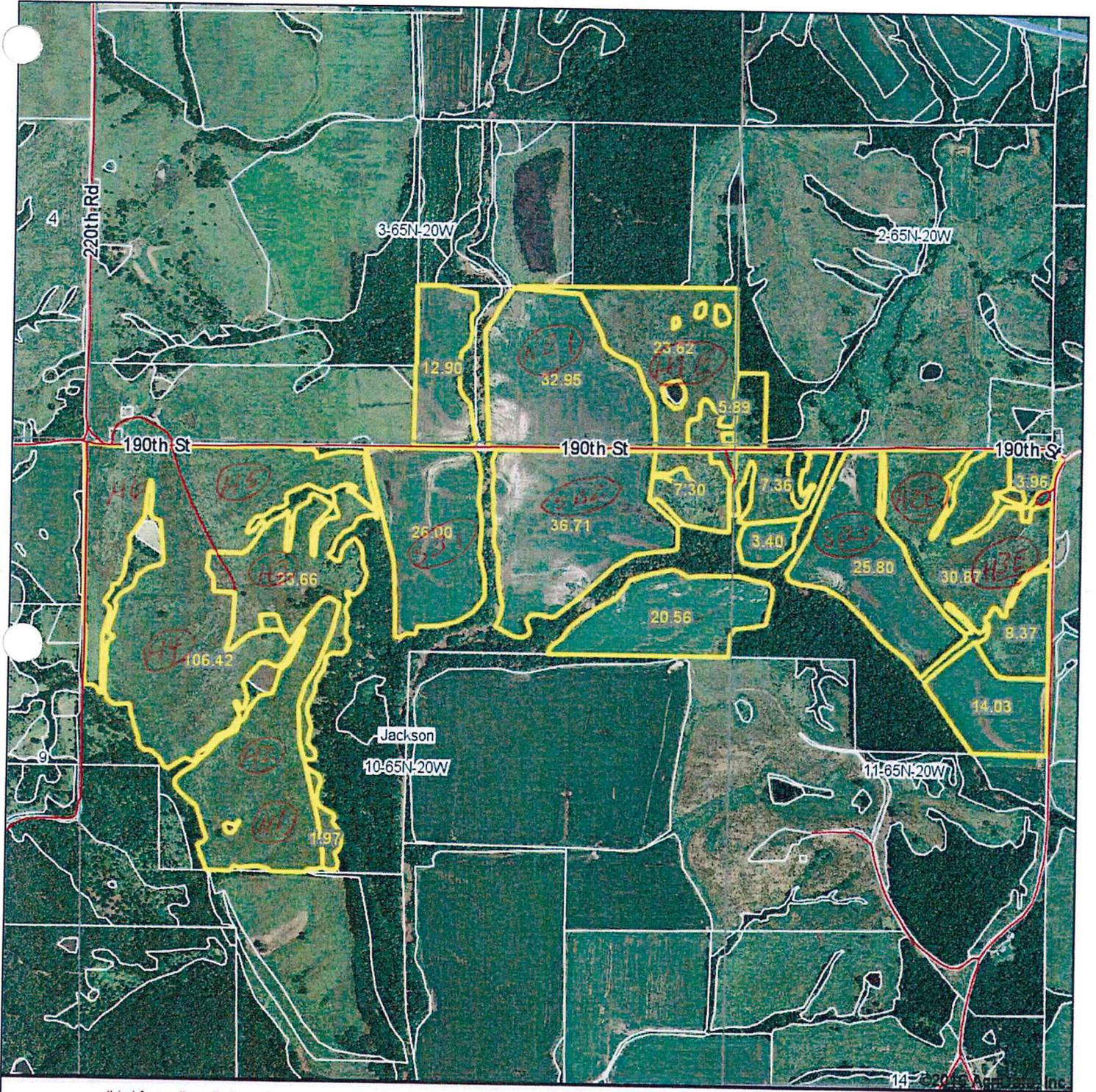
Table with columns: LAB NUMBER, SAMPLE IDENTIFICATION, ORGANIC MATTER, PHOSPHORUS, POTASSIUM, MAGNESIUM, CALCIUM, SODIUM, PH, BUFFER INDEX, CATION EXCHANGE CAPACITY, PERCENT BASE SATURATION, NITRATE-N (FIA), SULFUR, ZINC, IRON, COPPER, BORON, SOLUBLE SALTS.

REV. 12/03

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

# Aerial Map

TRUSNOR FARMS

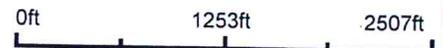


United Farmers Mercantile Cooperative

## UFMC

"Always To Serve You Better"

map center: 40.456172, -93.127067



Maps Provided By:



10-65N-20W  
Putnam County  
Missouri



3/22/2016

Field borders provided by Farm Service Agency as of 5/21/2008.

REPORT NUMBER

15-336-0459

COMPLETED DATE

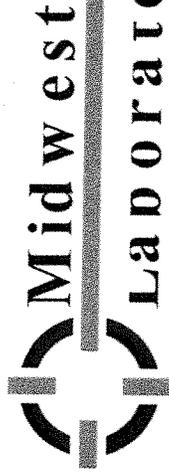
Dec 4, 2015

RECEIVED DATE

Dec 2, 2015

ACCOUNT

9169



13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121

www.midwestlabs.com

IDENTIFICATION

UNITED FARMERS MERCANTILE COOP Don Davis

BRUCE STREICHER

203 W OAK

RED OAK IA 51566-

PAGE 1/1

ISSUED DATE

Dec 04, 2015

SOIL ANALYSIS REPORT

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER LOI percent	PHOSPHORUS		POTASSIUM		MAGNESIUM		CALCIUM		SODIUM		SOIL pH	pH	BUFFER INDEX	CATION EXCHANGE CAPACITY CEC meq/100g	PERCENT BASE SATURATION				SOLUBLE SALTS	
			P (WEAK TEST) ppm	P (STRONG TEST) ppm	CLSN BCARBONATE P ppm	K ppm	Mg ppm	Ca ppm	Na ppm	%	%	%					%	%	Ca	Mg	K	%
41134	North Bottom 1	2.1	18	M	25	M	196	M	318	VH	3910	VII	7.8			22.7	2.2	11.7	86.1	0.0		
LAB NUMBER	SURFACE	NITRATE-N (RA)		SULFUR		ZINC		MANGANESE		IRON		COPPER		BORON		EXCESS LIME		SOLUBLE SALTS				
		depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	depth (ft)	ppm	
*292*		0-6																				
41134																						

REV 12/03

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

REPORT NUMBER

16-054-0193

ACCOUNT

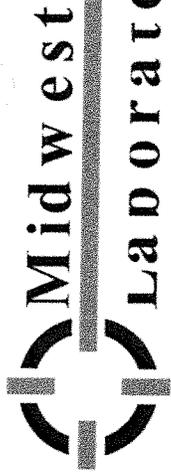
16-054-0193

COMPLETED DATE

Feb 25, 2016

RECEIVED DATE

Feb 23, 2016



13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121  
 www.midwestlabs.com

IDENTIFICATION

UNITED FARMERS MERCANTILE COOP on Davis

BRUCE STREICHER

203 W OAK

RED OAK IA 51566-

PAGE 1/1

ISSUE DATE

Feb 25, 2016

SOIL ANALYSIS REPORT

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER LOI percent	PHOSPHORUS		POTASSIUM		MAGNESIUM		CALCIUM		SODIUM		SOIL pH 1:1	BUFFER INDEX	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION				SOLUBLE SALTS																				
			P (WEAK BRAY) ppm	P (STRONG BRAY) ppm	CLSEN (BCARBONATE) ppm	K ppm	Mg ppm	Ca ppm	Na ppm	% 1:1	% VH	% H				% Ca	% Mg	% K	EXCES LIME RATE	BORON B SOLO DATA ppm	COPPER Cu DATA ppm	IRON Fe DATA ppm	MANGANESE Mn DATA ppm	ZINC Zn DATA ppm	SULFUR S ICAP ppm	Total lbs/A	depth (in)	depth (in)	depth (in)											
31689	Hill SE 1 14800	3.2	8	13	L	201	H	426	VH	3238	H		6.3	6.7	22.7	2.3	15.6	71.3	10.8																					
31690	Hill SE 2	3.3	17	23	M	224	VH	419	VH	2778	H		6.3	6.7	20.1	2.9	17.4	69.1	10.6																					
31691	Hill SE 3	2.7	24	65	VH	236	VH	521	VH	3064	H		6.7		20.3	3.0	21.4	75.6	0.0																					

LAB NUMBER	SURFACE			SUBSOIL 1			SUBSOIL 2			Total lbs/A												
	ppm	depth (in)	depth (in)	ppm	depth (in)	depth (in)	ppm	depth (in)	depth (in)													
31689		0-6								10	L	0.9	L									
31690		0-6								8	L	0.9	L									
31691		0-6								7	L	1.2	M									

INFO SHEET 788572

REV 1203

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

REPORT NUMBER

15-328-0405

ACCOUNT

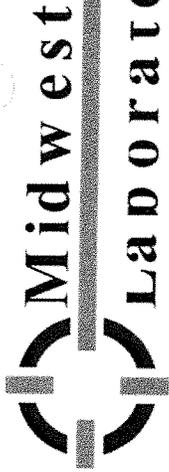
9169

COMPLETED DATE

NOV 27, 2015

RECEIVED DATE

NOV 24, 2015



13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121

WWW.MIDWESTLABS.COM

IDENTIFICATION

UNITED FARMERS MERCANTILE COOP

BRUCE STREICHER

203 W OAK

RED OAK IA 51566-

PAGE 1/1

LABORATORY DATE

Nov 27, 2015

SOIL ANALYSIS REPORT

Table with columns: LAB NUMBER, SAMPLE IDENTIFICATION, ORGANIC MATTER, PHOSPHORUS (P, P1, P2), POTASSIUM, MAGNESIUM, CALCIUM, SODIUM, PH, BUFFER INDEX, CATION EXCHANGE CAPACITY, PERCENT BASE SATURATION (% K, Mg, Ca, H, Na), NITRATE-N (FIA), SULFUR, ZINC, IRON, COPPER, BORON, MANGANESE, SOLUBLE SALTS.

REV 12/03

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.

REPORT NUMBER

16-067-0186

COMPLETED DATE

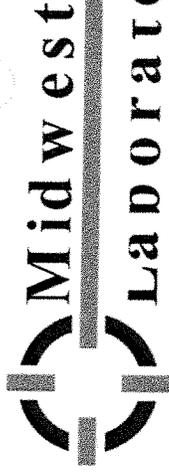
Mar 9, 2016

RECEIVED DATE

Mar 7, 2016

ACCOUNT

9169



**Midwest Laboratories Inc.**

13611 "B" Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121

www.midwestlabs.com

IDENTIFICATION

UNITED FARMERS MERCANTILE CO. **COO** in Davis

BRUCE STREICHER

203 W OAK

RED OAK IA 51566-

PAGE 1/1

LABORATORY

Mar 09, 2016

**SOIL ANALYSIS REPORT**

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER LOI percent	PHOSPHORUS			POTASSIUM			MAGNESIUM			CALCIUM			SODIUM			SOIL pH 1:1	BUFFER INDEX	CATION EXCHANGE CAPACITY meq/100g	PERCENT BASE SATURATION (COMPUTED)			
			P (WEAK Bray) 1:7 ppm	P (STRONG Bray) 1:3 ppm	P (BCARBONATE) ppm	K ppm	Mg ppm	Ca ppm	Na ppm	%	%	%	%	%	%	%	%				%	%	%	
*294*	Hill SW 1	2.3	32	49	H	182	H	344	VH	2899	H							17.8	2.6	16.1	81.3	0.0	0.0	
84392	Hill SW 2	2.7	46	62	VH	203	H	477	VH	3280	H							20.9	2.5	19.0	78.5	0.0	0.0	
84393	Hill SW 3	2.7	25	36	M	186	H	402	VH	3002	H							18.8	2.5	17.8	79.7	0.0	0.0	
84394	Hill SW 4	2.8	18	34	M	141	M	387	VH	2878	H							18.0	2.0	17.9	80.1	0.0	0.0	
84395	Hill SW 5	3.2	9	17	L	135	M	359	VH	3129	H							19.0	1.8	15.7	82.5	0.0	0.0	
84397	Hill SW 6	3.1	10	18	L	145	M	365	VH	2824	H							17.5	2.1	17.4	80.5	0.0	0.0	

LAB NUMBER	SURFACE		SUBSOIL 1		SUBSOIL 2		Total lbs/A
	ppm	depth (in)	ppm	depth (in)	ppm	depth (in)	
	lbs/A	depth (in)	lbs/A	depth (in)	lbs/A	depth (in)	
*294*							
84391	0-6						
84392	0-6						
84393	0-6						
84394	0-6						
84395	0-6						
84397	0-6						

LAB NUMBER	SULFUR		ZINC		MANGANESE		IRON		COPPER		BORON		EXCESS LIMES		SOLUBLE SALTS	
	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	mmho/cm	RATE
*294*																
84391																
84392																
84393																
84394																
84395																
84397																

REV 12/03

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days. Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.