

# Trenton Farms RE, LLC

728.7 ac.

MO602419P1300  
12.2 ac.  
P-Index 2.2 [Low]  
G - 11/12/12  
Conv/C-SB

MO602420P4000  
104.6 ac.  
P-Index 1.2 [Low]  
G - 11/12/12  
Conv/C-SB

MO602421P3500B  
21.6 ac.  
P-Index 1.6 [Low]  
G - 11/12/12  
Conv/C-SB

Trenton Farms RE, LLC

MO602419P4000  
102.2 ac.  
P-Index 1.1 [Low]  
G - 11/12/12  
Conv/C-SB

MO602420P3400  
29.3 ac.  
P-Index 1.4 [Low]  
G - 11/12/12  
Conv/C-SB

MO602430P1150B  
4.9 ac.  
P-Index 1.1 [Low]  
G - 12/06/12  
Conv/C-SB

MO602421P3500C  
18.7 ac.  
P-Index 1.8 [Low]  
G - 11/12/12  
Conv/C-SB

MO602430P1150C  
6.0 ac.  
P-Index 1.2 [Low]  
G - 12/06/12  
Conv/C-SB

MO602430P1400  
13.9 ac.  
P-Index 1.2 [Low]  
G - 12/06/12  
Conv/C-SB

MO602429P8000D  
284.0 ac.  
P-Index 1.2 [Low]  
G - 12/06/12  
Conv/C-SB

MO602430P3400  
14.8 ac.  
P-Index 0.4 [Low]  
G - 11/30/12  
Pasture

MO602429P8000B  
94.7 ac.  
P-Index 0.8 [Low]  
G - 12/06/12  
Conv/C-SB

MO602429P8000C  
21.7 ac.  
P-Index 2.1 [Low]  
G - 12/06/12  
Conv/C-SB

## Overview Map Grundy County

*new*  
*submitted 6/3/15*  
*7/16/15*  
*Abe*

Farm Name: Trenton Farms RE, LLC  
Location: Grundy County,  
Missouri, United States  
Map Name: Overview Map  
Number of Fields: 13  
Total Acres: 728.7



Trenton Farms RE LLC; 15  
Nitrogen Rate Ap (728.7 ac. - 100%)



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Website: [www.grahamsold.com](http://www.grahamsold.com)



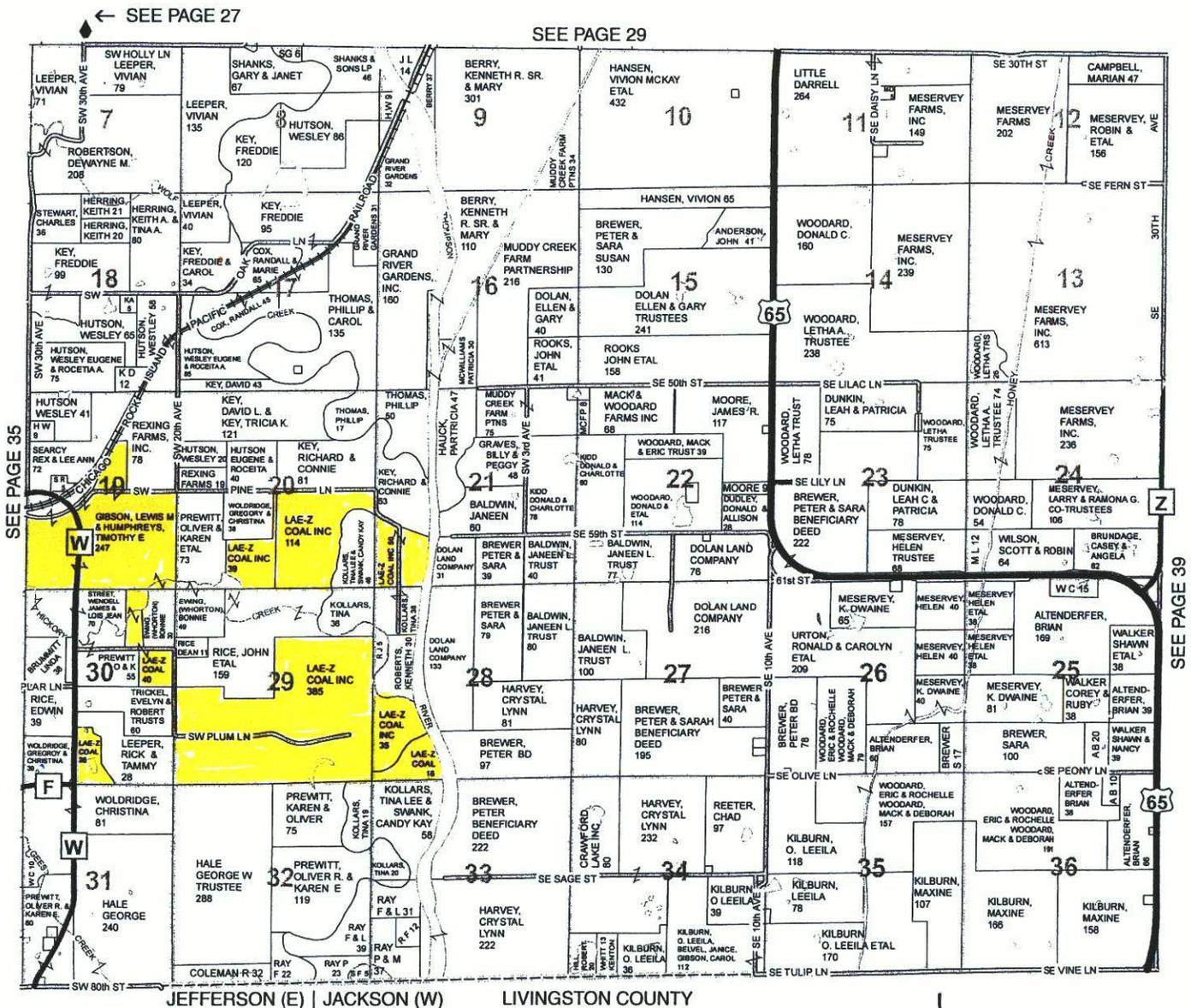
Dan R. Graham  
Broker/Owner



Jackson (W) & Jefferson (E)

Township 60N - Range 24W

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## Overview Map Grundy County

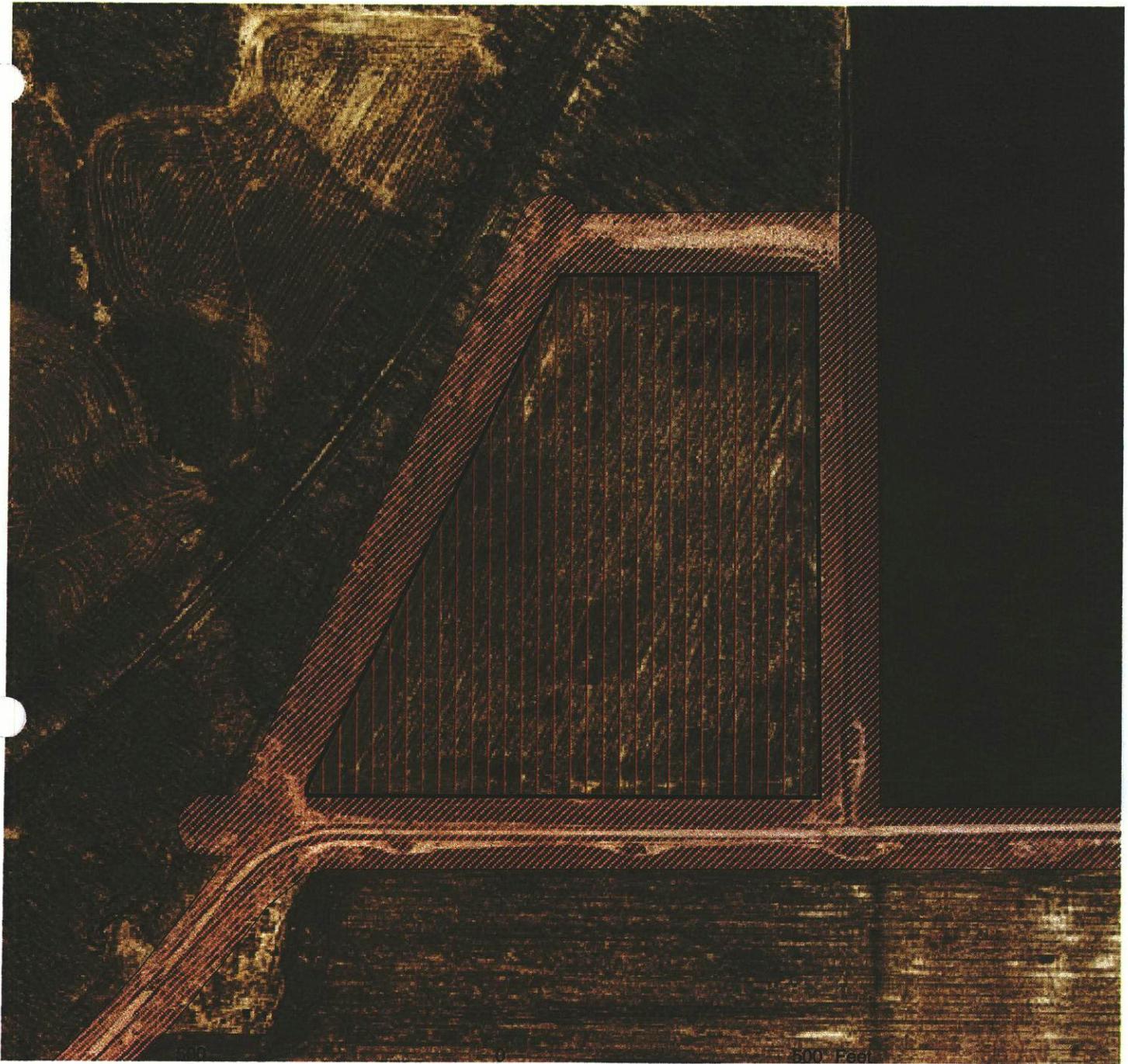
Farm Name: Trenton Farms RE, LLC  
 Location: Grundy County,  
 Missouri, United States  
 Client Name: Overview Map  
 Number of Fields: 13  
 Total Acres: 728.7



Trenton Farms RE LLC; 15  
 Nitrogen Rate Ap (728.7 ac. - 100%)

*Jord Hre*

MO602419P1300; 15 (14.37 ac.)



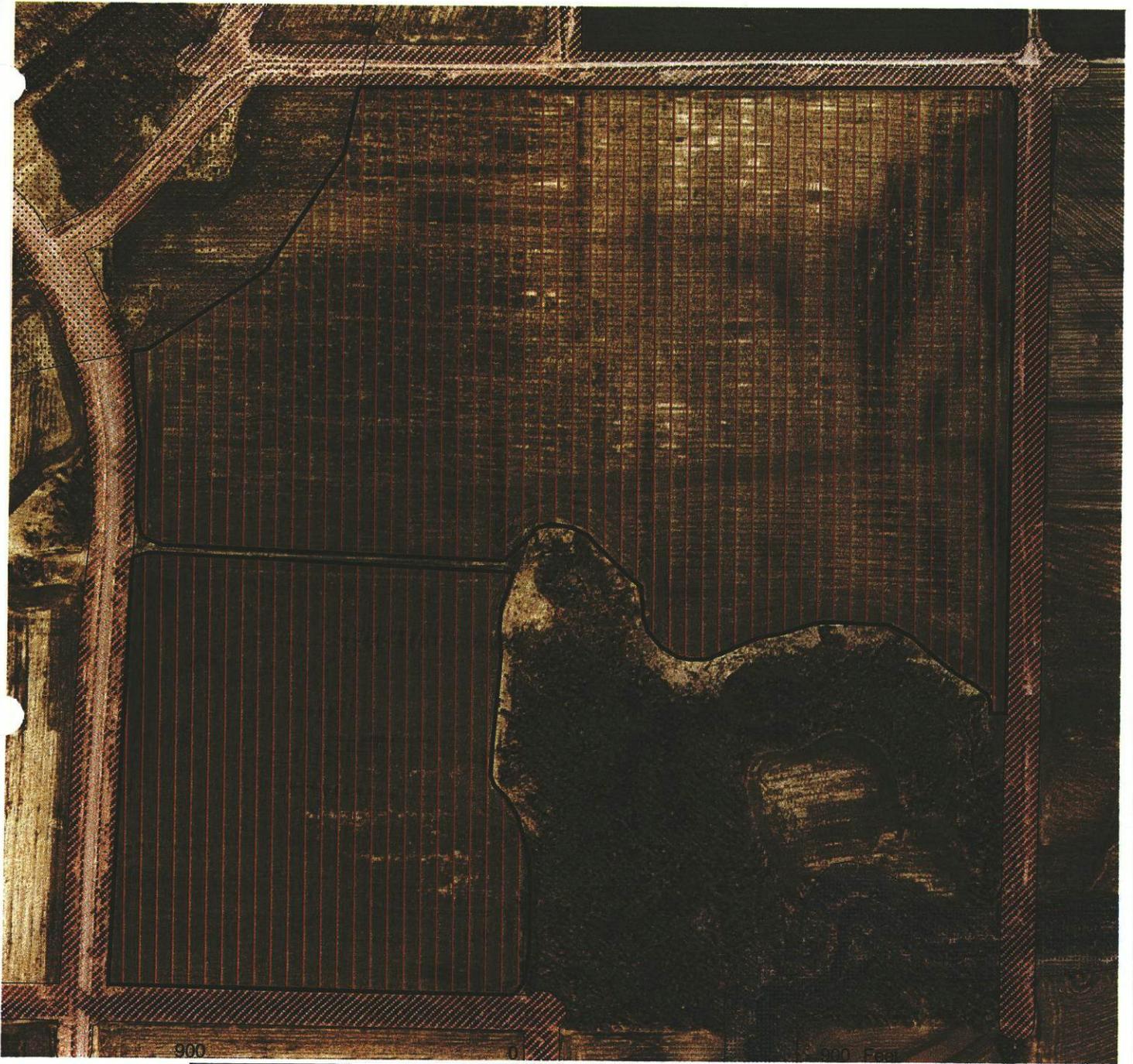
Date: Mar 13, 2015  
Field Name: MO602419P1300; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 14.37  
Field Boundary Start Location:  
Latitude: 39.99883201  
Longitude: -93.64171449

*void*  
*RR*



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

MO602419P4000; 15 (112.19 ac.)



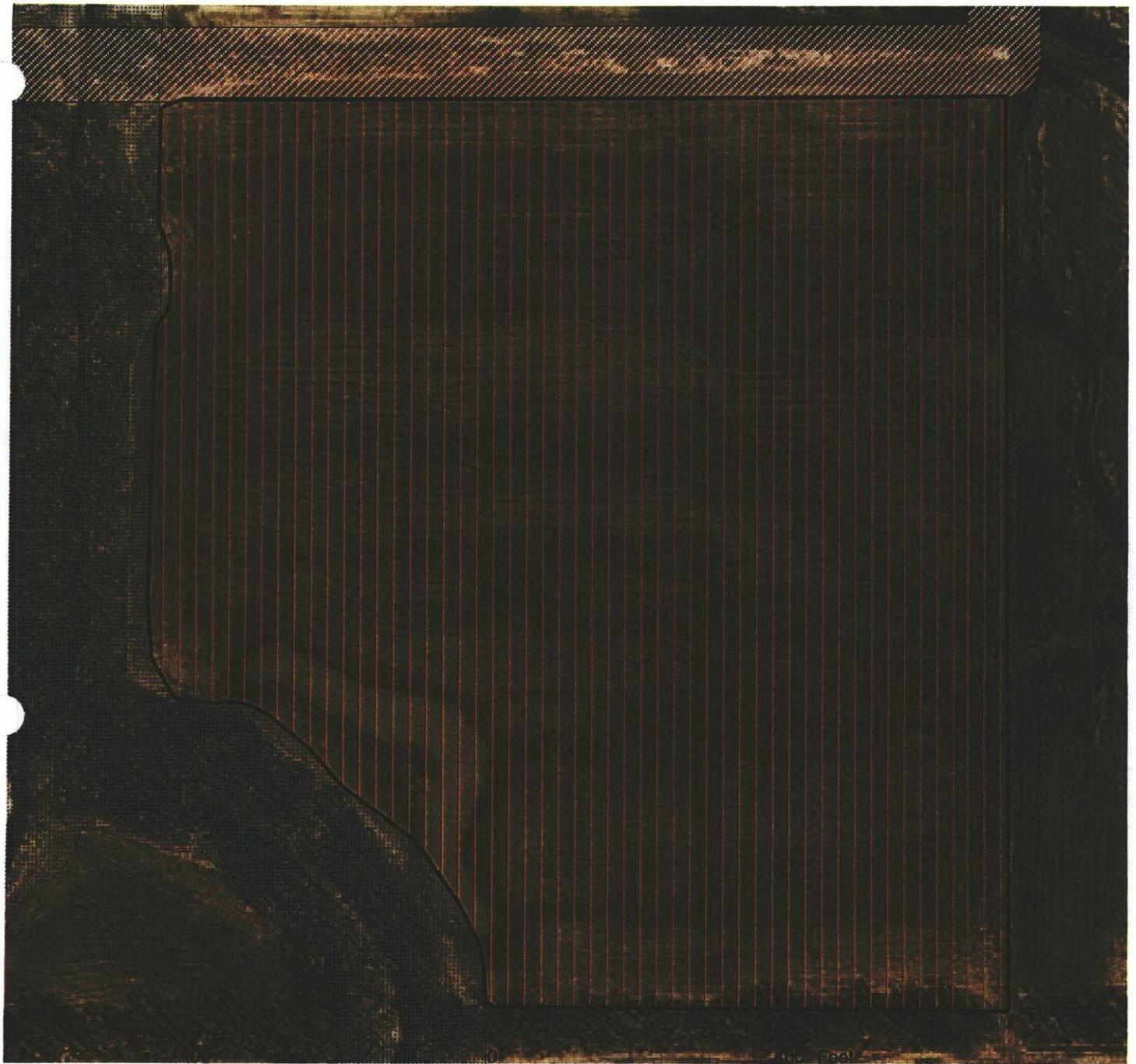
*Void  
JSE*

Date: Mar 27, 2015  
Field Name: MO602419P4000; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 112.19  
Field Boundary Start Location:  
Latitude: 39.99160819  
Longitude: -93.64565825



-  (102.2ac.) Field Boundary
-  1000 ft Residence Buffer
-  50 ft Property Line/Road Buffer
-  100 ft Water Buffer

MO602420P3400; 15 (30.89 ac.)



*VOID*

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.)



1000 Feet

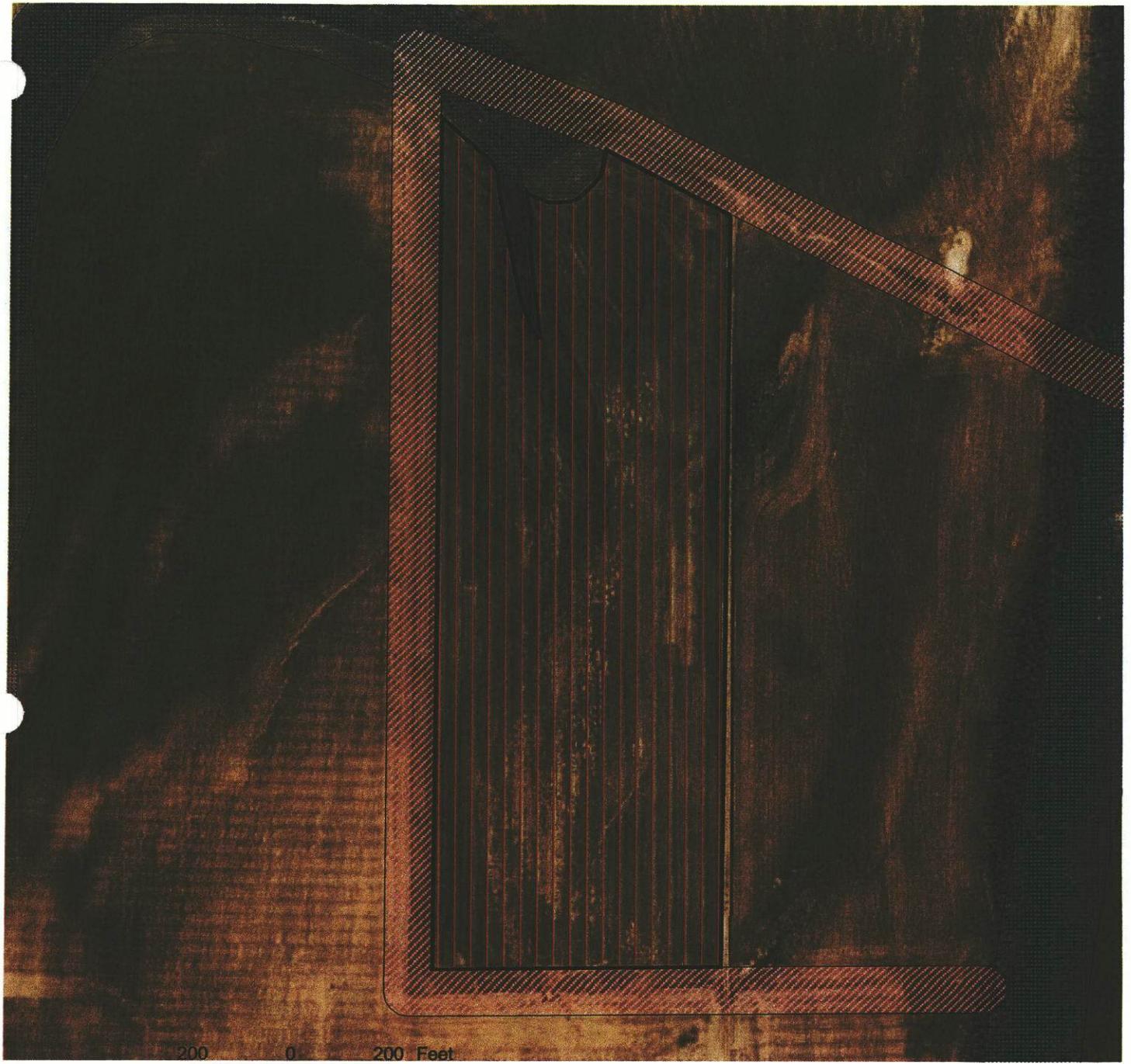
*JOE*

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.)



200 0 200 Feet

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

*VOID*  
*ASD*



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

MO602421P3500C; 15 (19.83 ac.)



200 0 200 Feet

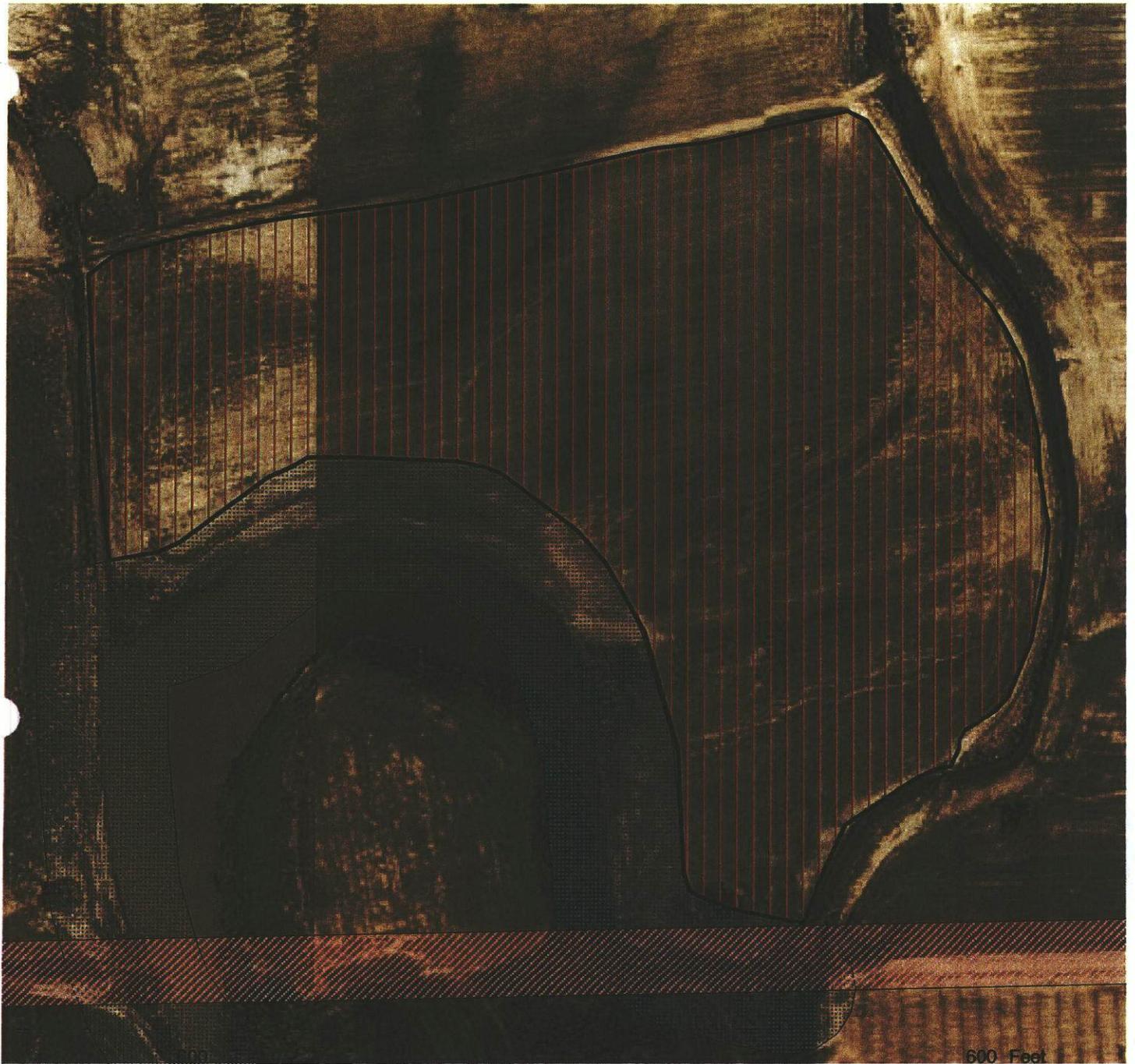
*Void of fee*

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

MO602429P8000C; 15 (24.07 ac.)



600 Feet

*Void  
JAE*

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

MO602429P8000B; 15 (98.70 ac.)



Feet



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

*void  
yke*



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

MO602429P8000D; 15 (297.48 ac.)



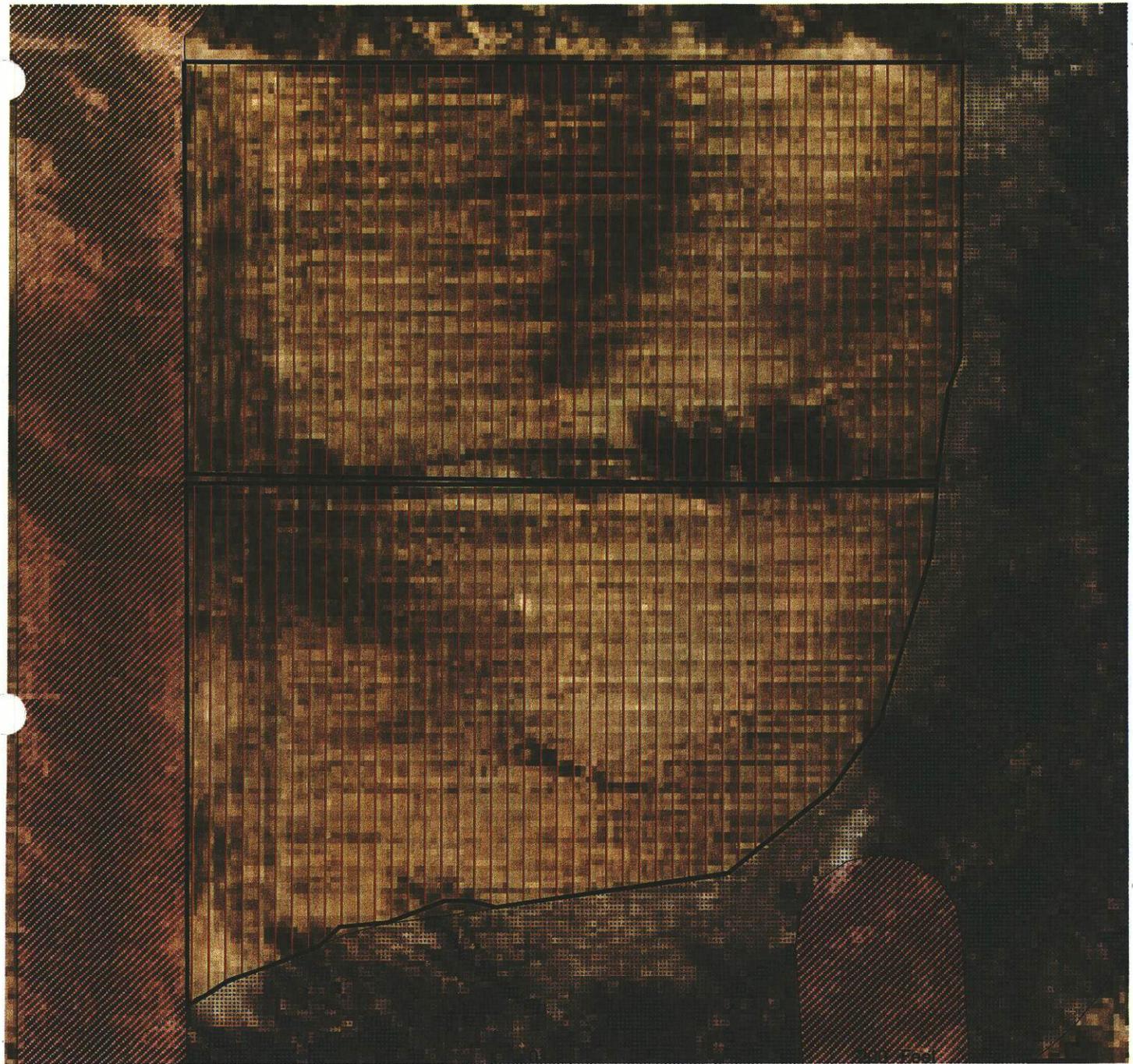
Date: Mar 27, 2015  
Field Name: MO602429P8000D; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 297.48  
Field Boundary Start Location:  
Latitude: 39.98798974  
Longitude: -93.62515936

*void*  
*me*



-  (284.0ac.) Field Boundary
-  50 ft Property Line/Road Buffer
-  100 ft Water Buffer

MO602430P1150B; 15 (5.97 ac.)



*Void*  
*SLP*

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.)



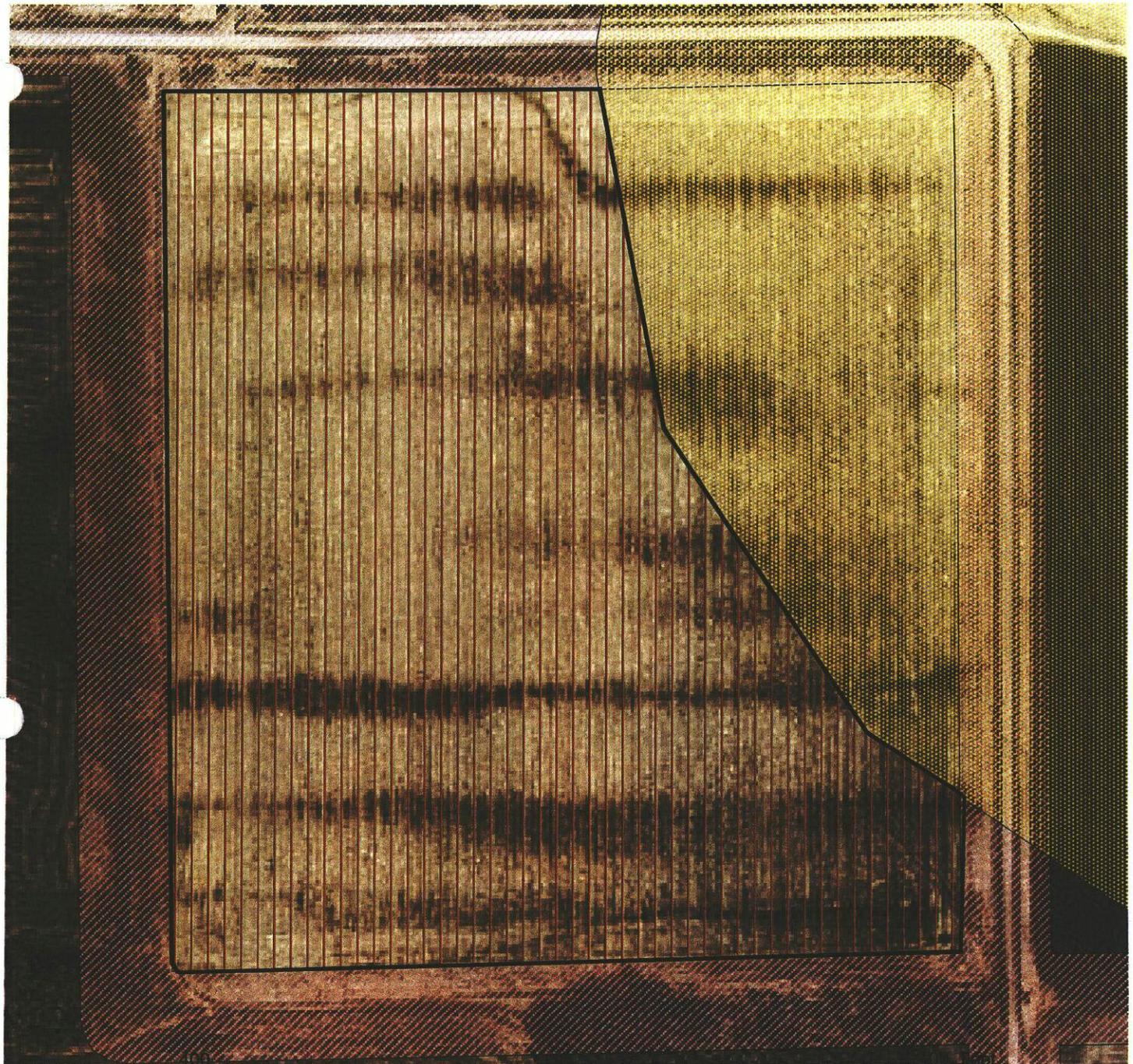
Date: Mar 27, 2015  
Field Name: MO602430P1150C; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 6.92  
Field Boundary Start Location:  
Latitude: 39.98712251  
Longitude: -93.63980063

*void  
MJE*



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

MO602430P1400; 15 (21.02 ac.)



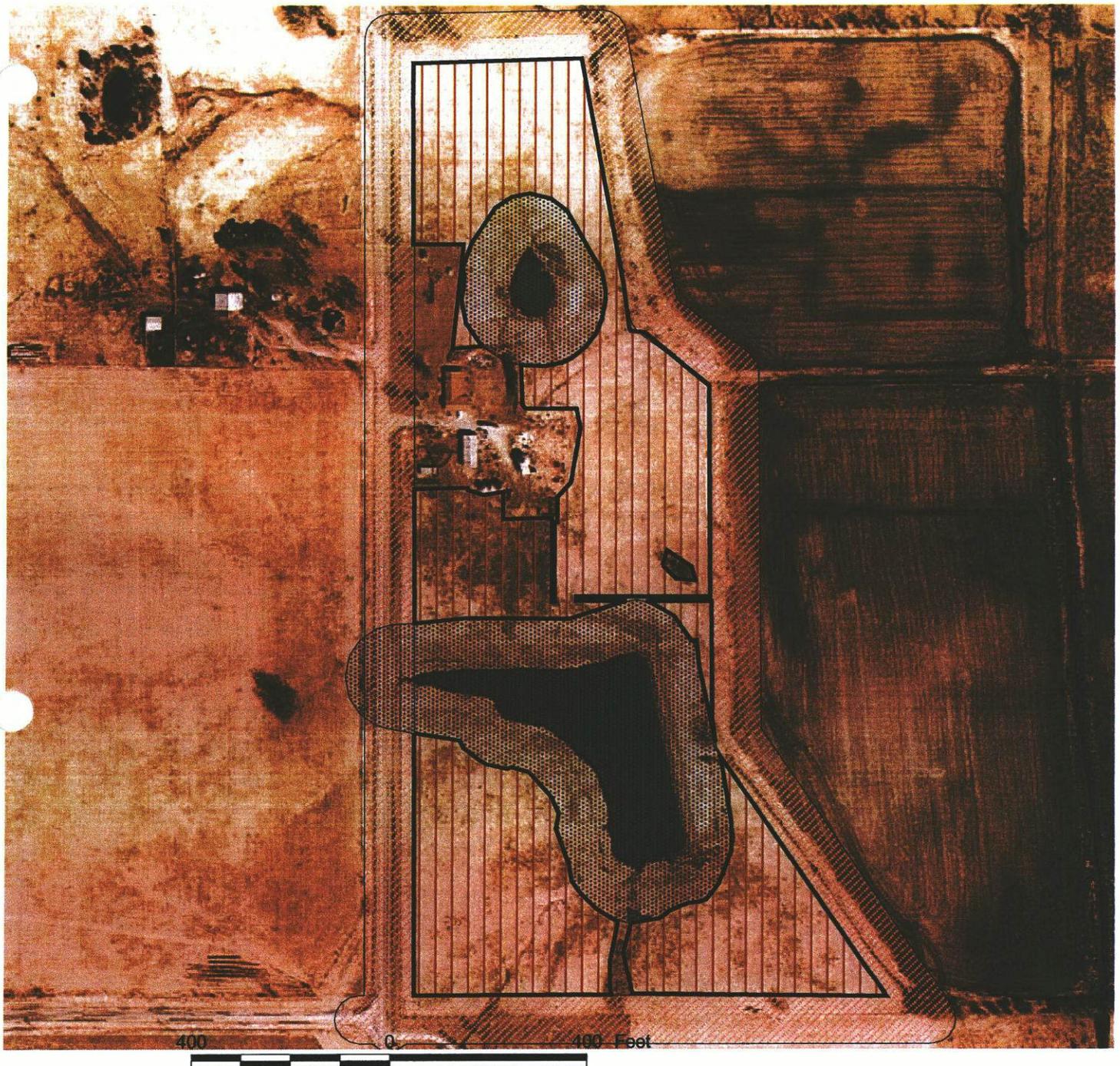
*10/17/15*

Date: Mar 27, 2015  
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



-  (13.9ac.) Field Boundary
-  1000 ft Residence Buffer
-  50 ft Property Line/Road Buffer
-  100 ft Water Buffer

MO602430P3400; 15 (20.78 ac.)



Date: Mar 31, 2015  
Field Name: MO602430P3400; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 20.78  
Field Boundary Start Location:  
Latitude: 39.97765096  
Longitude: -93.64402174

*VOID*  
*JM*



-  (14.8ac.) Field Boundary
-  100ft Water Buffer
-  50 ft Property Line/Road Buffer



## 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 %

| 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

RUSLE 2  
 P Index  
 Yield

**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                          |

voint  
 11/20



## 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 %

| 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)

tjust 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                          |

10/10  
1/10



## 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 %

| 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)

jjust 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                          |

void  
HJL



## 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)

jjust 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                          |

*void  
MR*

| County  | MO602419P1300<br>Grundy | MO602419P4000<br>Grundy | MO602420P3400<br>Grundy | MO602420P4000<br>Grundy |
|---|-------------------------|-------------------------|-------------------------|-------------------------|
| Soil test P level<br>Units                        | 13<br>ppm               | 10.1<br>ppm             | 18<br>ppm               | 12.5<br>ppm             |
| Extraction Procedure<br>Sampling depth            | Bray-I<br>6 to 8 inches |
| Tillage   | Tilled                  | Tilled                  | Tilled                  | Tilled                  |
| RUSLE value - average annual<br>(tons/ac)         | 3.6                     | 1.3                     | 1.3                     | 1.3                     |
| Land cover  | Row crop - straight row |
| Hydrologic soil group                             | C                       | C                       | C                       | C                       |
| Hydrologic condition                              | Good                    | Good                    | Good                    | Good                    |
| Distance from center of field to<br>water feature | 2370                    | 1330.6                  | 558.6                   | 959.9                   |
| Particulate P value                               | 2.0                     | 0.9                     | 1.1                     | 1.0                     |
| Soluble P value                                   | 0.2                     | 0.2                     | 0.3                     | 0.2                     |
| Total P value                                     | 2.2                     | 1.1                     | 1.4                     | 1.2                     |
| P index rating                                    | LOW                     | LOW                     | LOW                     | LOW                     |
| Agronomic P rating (Opt. = 45 lbs/a)              | MEDIUM                  | LOW                     | MEDIUM                  | MEDIUM                  |
| Sensitivity value                                 | 2.6                     | 2.2                     | 2.2                     | 2.2                     |

*void*  
*Yok*



## 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 %

| 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)

jjust 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                          |

*With  
Moe*

## 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 %

| 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                          |

*2016  
MKE*

| County  | MO602421P3500B<br>Grundy | MO602421P3500C<br>Grundy | Scotland                                       | Scotland                          |
|---|--------------------------|--------------------------|--|-----------------------------------|
| Soil test P level<br>Units                        | 11<br>ppm                | 11<br>ppm                | 0<br>ppm                                       | 0<br>ppm                          |
| Extraction Procedure                              | Bray-I                   | Bray-I                   | Mehlich-III                                    | Mehlich-III                       |
| Sampling depth                                    | 6 to 8 inches            | 6 to 8 inches            | 6 to 8 inches                                  | 6 to 8 inches                     |
| Tillage   | Tilled                   | Tilled                   | Tilled   | Tilled                            |
| RUSLE value - average annual<br>(tons/ac)         | 1.9                      | 1.9                      | 0  | 0                                 |
| Land cover  | Row crop - straight row  | Row crop - straight row  | Row crop - contoured and terraced with residue | Row crop - contoured with residue |
| Hydrologic soil group                             | C                        | C                        | C  | C                                 |
| Hydrologic condition                              | Good                     | Good                     | Good   | Good                              |
| Distance from center of field to<br>water feature | 918                      | 457.8                    | 0  | 0                                 |
| Particulate P value                               | 1.4                      | 1.6                      | 0.0  | 0.0                               |
| Soluble P value                                   | 0.2                      | 0.2                      | 0.0  | 0.0                               |
| Total P value                                     | 1.8                      | 1.8                      | 0.0  | 0.0                               |
| P index rating                                    | LOW                      | LOW                      | LOW  | LOW                               |
| Agronomic P rating (Opt. = 45 lbs/a)              | LOW                      | LOW                      | Non-agronomic test for MO                      | Non-agronomic test for MO         |
| Sensitivity value                                 | 2.4                      | 2.4                      | 1.3  | 1.6                               |

*VOID*  
*SP*



## 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 %

| 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: 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                          |

*Vois  
1/12*



## 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 %

| 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                          |

Vofb  
4/10



## RUSLE2 Profile Erosion Calculation Record

Info: MO602429P8000D

**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                          |

void  
4/10



## 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 %

| 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: 1.4 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

| 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                          |

*VOID*  
*M/A*

| County  | MO602429P8000B          | MO6024129P80000C        | MO602429P8000D          | MO602430P1150B          |
|---|-------------------------|-------------------------|-------------------------|-------------------------|
| Soil test P level<br>Units                        | 18.4<br>ppm             | 18.4<br>ppm             | 18.4<br>ppm             | 12.5<br>ppm             |
| Extraction Procedure<br>Sampling depth            | Bray-I<br>6 to 8 inches |
| Tillage   | Tilled                  | Tilled                  | Tilled                  | Tilled                  |
| RUSLE value - average annual<br>(tons/ac)         | 0.6                     | 1.9                     | 1.3                     | 1.4                     |
| Land cover  | Row crop - straight row |
| Hydrologic soil group<br>Hydrologic condition     | D<br>Good               | C<br>Good               | C<br>Good               | B<br>Good               |
| Distance from center of field to<br>water feature | 1790.3                  | 285.1                   | 1481.3                  | 311.2                   |

|                     |     |     |     |     |
|---------------------|-----|-----|-----|-----|
| Particulate P value | 0.4 | 1.7 | 0.9 | 0.9 |
| Soluble P value     | 0.4 | 0.3 | 0.3 | 0.2 |
| Total P value       | 0.8 | 2.1 | 1.2 | 1.0 |

|                                      |        |        |        |        |
|--------------------------------------|--------|--------|--------|--------|
| P index rating                       | LOW    | LOW    | LOW    | LOW    |
| Agronomic P rating (Opt. = 45 lbs/a) | MEDIUM | MEDIUM | MEDIUM | MEDIUM |
| Sensitivity value                    | 2.3    | 2.5    | 2.2    | 1.7    |

*Vol 6  
M*



## 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)

Surface drainage: (none)

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                          |

VOID  
1/60



## 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                          |

*John HAD*

| County  | MO602430P1150C          | MO602430P1400           | Grundy                  | Grundy                  |
|---|-------------------------|-------------------------|-------------------------|-------------------------|
| Soil test P level<br>Units                        | 12.5<br>ppm             | 12.5<br>ppm             | 0<br>ppm                | 0<br>ppm                |
| Extraction Procedure<br>Sampling depth            | Bray-I<br>6 to 8 inches |
| Tillage   | Tilled                  | Tilled                  | Tilled                  | Tilled                  |
| RUSLE value - average annual<br>(tons/ac)         | 1.1                     | 1.3                     | 0                       | 0                       |
| Land cover  | Row crop - straight row |
| Hydrologic soil group                             | C                       | C                       | C                       | B                       |
| Hydrologic condition                              | Good                    | Good                    | Good                    | Good                    |
| Distance from center of field to<br>water feature | 182.9                   | 1286.5                  | 0                       | 0                       |
| Particulate P value                               | 1.0                     | 1.0                     | 0.0                     | 0.0                     |
| Soluble P value                                   | 0.2                     | 0.2                     | 0.0                     | 0.0                     |
| Total P value                                     | 1.2                     | 1.2                     | 0.0                     | 0.0                     |
| P index rating                                    | LOW                     | LOW                     | LOW                     | LOW                     |
| Agronomic P rating (Opt = 45 lbs/a)               | MEDIUM                  | MEDIUM                  | LOW                     | LOW                     |
| Sensitivity value                                 | 2.2                     | 2.2                     | 1.9                     | 1.4                     |

*void  
3/2*



## RUSLE2 Profile Erosion Calculation Record

Info: MO602430P3400

File: profiles\default

**Inputs:**

Location: USA\Missouri\Grundy County  
 Soil: Grundy County, Missouri\30194 Shelby clay loam, eroded\Shelby clay loam 95%  
 Slope length (horiz): 200 ft  
 Avg. slope steepness: 17 %

| 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: 200 ft  
 Surf. cover after planting: -- %  
 Avg. ann. forage harvest: 5000 lb/ac

*void*  
*SP*

|        | 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 |  | 60                          |
| 6/20/0 | Graze, rotational                            | Grass, cool season pasture, regrowth after grazing | 53                          |
| 8/1/0  | Graze, rotational                            | Grass, cool season pasture, regrowth after grazing | 46                          |
| 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                          |

Void  
4/10

MO602430P3400

| County  | Grundy                  | Scotland                          | Scotland                                       | Scotland                          |
|---|-------------------------|-----------------------------------|--|-----------------------------------|
| Soil test P level<br>Units                        | 8<br>ppm                | 0<br>ppm                          | 0<br>ppm                                       | 0<br>ppm                          |
| Extraction Procedure<br>Sampling depth            | Bray-I<br>6 to 8 inches | Mehlich-III<br>6 to 8 inches      | Mehlich-III<br>6 to 8 inches                   | Mehlich-III<br>6 to 8 inches      |
| Tillage   | No-till or Forage       | Tilled                            | Tilled   | Tilled                            |
| RUSLE value - average annual<br>(tons/ac)         | 0.14                    | 0                                 | 0  | 0                                 |
| Land cover  | Pasture                 | Row crop - contoured with residue | Row crop - contoured and terraced with residue | Row crop - contoured with residue |
| Hydrologic soil group                             | C                       | C                                 | C  | C                                 |
| Hydrologic condition                              | Good                    | Good                              | Good   | Good                              |
| Distance from center of field to<br>water feature | 285.1                   | 0                                 | 0  | 0                                 |
| Particulate P value                               | 0.1                     | 0.0                               | 0.0  | 0.0                               |
| Soluble P value                                   | 0.3                     | 0.0                               | 0.0  | 0.0                               |
| Total P value                                     | 0.4                     | 0.0                               | 0.0  | 0.0                               |
| P index rating                                    | LOW                     | LOW                               | LOW  | LOW                               |
| Agronomic P rating (Opt = 45 lbs/a)               | LOW                     | Non-agronomic test for MO         | Non-agronomic test for MO                      | Non-agronomic test for MO         |
| Sensitivity value                                 | 1.2                     | 1.6                               | 1.3  | 1.6                               |

*Word  
usage*

**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*

*void g/p*

**Quick Stats**

Home Recent Statistics Reveal more 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*

*void*

**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% = ~~1.99~~*  
*2.00*

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# 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:  
**6/2015 - 5/2016**

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:** June 2015 - May 2020

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**A. Manure Transfers - 6/2015 - 5/2016**

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 - 6/2015 - 5/2016

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Oct 2015       | MO602419P<br>4000  |             | Corn grain      | GDU       | Injector Tank         | 61.8          | 4,000            | Gal            | 247,000       |
| Oct 2015       | MO602429P<br>8000B |             | Soybeans        | Gestation | Injector Tank         | 94.8          | 5,800            | Gal            | 549,900       |
| Oct 2015       | MO602429P<br>8000C |             | Soybeans        | Gestation | Injector Tank         | 21.7          | 5,800            | Gal            | 126,100       |
| Oct 2015       | MO602429P<br>8000D |             | Soybeans        | Gestation | Injector Tank         | 225.0         | 5,800            | Gal            | 1,305,200     |
| Nov 2015       | MO602429P<br>8000D |             | Soybeans        | Gestation | Injector Tank         | 59.1          | 5,800            | Gal            | 342,550       |

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Manure Application Records - 6/2015 - 5/2016

| 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 - 6/2015 - 5/2016 (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.

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**C. Planned Commercial Fertilizer Applications - 6/2015 - 5/2016**

No planned commercial fertilizer applications for the period.

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**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.

*void*

6/2015 - 5/2016 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<br>bu | 100 | 75                            | 80               |

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.

6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>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 2015      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 4,000 gal/a   |  |  |  |
| Acres Covered                            | 61.8          |  |  |  |
| Total Applied                            | 247,000 gal   |  |  |  |
| Loads per Field                          | 38.0          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acre)                             | 154           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 168           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 106           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

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6/2015 - 5/2016 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<br>bu | 100 | 65                            | 85               |

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.

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6/2015 - 5/2016 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<br>bu | 0 | 45                            | 110              |

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.

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6/2015 - 5/2016 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<br>bu | 100 | 85                            | 85               |

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.

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6/2015 - 5/2016 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<br>bu | 100 | 85                            | 85               |

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.

*Void*

6/2015 - 5/2016 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<br>bu | 0 | 45                            | 75               |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Oct 2015      |  |  |  |
| Manure Source                            | Gestation     |  |  |  |
| Application Rate                         | 5,800 gal/a   |  |  |  |
| Acres Covered                            | 94.8          |  |  |  |
| Total Applied                            | 549,900 gal   |  |  |  |
| Loads per Field                          | 84.6          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 96            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 145           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 206           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

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6/2015 - 5/2016 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<br>bu | 0 | 45                            | 75               |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Oct 2015      |  |  |
| Manure Source                            | Gestation     |  |  |
| Application Rate                         | 5,800 gal/a   |  |  |
| Acres Covered                            | 21.7          |  |  |
| Total Applied                            | 126,100 gal   |  |  |
| Loads per Field                          | 19.4          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 96            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 145           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 206           |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

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*SK*

6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 297.5 | Spreadable Acres:    | 284.0      |
| Non-Spreadable Acres: | 13.5  | 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<br>bu | 0 | 45                            | 75               |

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

Manure Management

|  | Application 1 | Application 2 |  |  |
|--|---------------|---------------|--|--|
| Application Time                         | Oct 2015      | Nov 2015      |  |  |
| Manure Source                            | Gestation     | Gestation     |  |  |
| Application Rate                         | 5,800 gal/a   | 5,800 gal/a   |  |  |
| Acres Covered                            | 225.0         | 59.1          |  |  |
| Total Applied                            | 1,305,200 gal | 342,550 gal   |  |  |
| Loads per Field                          | 200.8         | 52.7          |  |  |
| Placement                                | Injected      | Injected      |  |  |
| N (lbs/acres)                            | 96            | 96            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 145           | 145           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 206           | 206           |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

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6/2015 - 5/2016 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<br>bu | 100 | 80                            | 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.

*VOID  
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6/2015 - 5/2016 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<br>bu | 100 | 80                            | 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.

*Wick  
MDE*

6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 100 | 80                            | 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.

void  
HPO

**6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P3400**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 20.8 | Spreadable Acres:    | 14.8       |
| Non-Spreadable Acres: | 6.0  | 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 ton      | 80 | 40                            | 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**

\* 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.

*Uoid  
3/30*

Summary Tables - 6/2015 - 5/2016

F. Manure Summary: 6/2015 - 5/2016

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 0         | 0        |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 2,323,750 | 247,000  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 2,323,750 | 247,000  |  |  |
| End of Year Inventory       | 2,234,250 | 255,000  |  |  |

G. Land Applied Nutrient Summary: 6/2015 - 5/2016

|                          | 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                | 2,323,750      | gals | 38,458           | 58,087                        | 82,524           |
| GDU                      | 247,000        | gals | 9,517            | 10,382                        | 6,551            |
| <b>Manure Total</b>      |                |      | 47,975           | 68,469                        | 89,075           |
|                          |                |      |                  |                               |                  |
|                          | 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>             |                |      | 47,975           | 68,469                        | 89,075           |

void

**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       | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602420P4000  |             | 108.8      | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602421P3500B |             | 25.2       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602421P3500C |             | 19.8       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602429P8000B |             | 98.7       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000C |             | 24.1       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000D |             | 297.5      | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602430P1150B |             | 6.0        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1150C |             | 6.9        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1400  |             | 21.0       | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P3400  |             | 20.8       | 2012      | 6.6             | 5.7 | Medium    | 652        | High      | 740                                 | 0 [D]                             |

<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.

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

*Void*  
*2-12*

I. Crop Record Keeping Table: 6/2015 - 5/2016

| Field ID           | Field SubID | Crop                      | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|--------------------|-------------|---------------------------|---------------|-------------------|--------------|-----------------|---------|
| MO602419P<br>1300  |             | Corn grain                |               |                   |              |                 |         |
| MO602419P<br>4000  |             | Corn grain                |               |                   |              |                 |         |
| MO602420P<br>3400  |             | Corn grain                |               |                   |              |                 |         |
| MO602420P<br>4000  |             | Soybeans                  |               |                   |              |                 |         |
| MO602421P<br>3500B |             | Corn grain                |               |                   |              |                 |         |
| MO602421P<br>3500C |             | Corn grain                |               |                   |              |                 |         |
| MO602429P<br>8000B |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000C |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000D |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>1150B |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1150C |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1400  |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>3400  |             | Cool season grass pasture |               |                   |              |                 |         |

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### 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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 3/31/2015 12:49:31 PM  
Exported: 3/31/2015 12:58:54 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

**Operation:**

Name: Trenton Farms RE, LLC

**Operation Contact:**

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

VOID  
HP

# 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:  
**6/2016 - 5/2017**

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:** June 2015 - May 2020

*Handwritten signature:*  
Vance  
NR

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A. Manure Transfers - 6/2016 - 5/2017

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 |
|----------------|---------------|------------------|--------------------|------------------------|-------|-------|
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |

*void*

**B. Planned Manure Applications - 6/2016 - 5/2017**

| Month and Year | Field ID           | Field SubID | Planned Crop(s)              | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|------------------------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Jun 2016       | MO602430P<br>3400  |             | Cool season<br>grass pasture | Gestation | Injector Tank         | 14.9          | 4,900            | Gal            | 72,800        |
| Oct 2016       | MO602419P<br>1300  |             | Soybeans                     | GDU       | Injector Tank         | 12.3          | 2,600            | Gal            | 31,850        |
| Oct 2016       | MO602419P<br>4000  |             | Soybeans                     | GDU       | Injector Tank         | 102.4         | 2,400            | Gal            | 245,700       |
| Oct 2016       | MO602420P<br>3400  |             | Soybeans                     | GDU       | Injector Tank         | 29.5          | 2,600            | Gal            | 76,700        |
| Oct 2016       | MO602420P<br>4000  |             | Corn grain                   | Gestation | Injector Tank         | 75.6          | 9,300            | Gal            | 703,300       |
| Oct 2016       | MO602421P<br>3500C |             | Soybeans                     | Gestation | Injector Tank         | 18.8          | 6,100            | Gal            | 114,400       |
| Oct 2016       | MO602429P<br>8000B |             | Corn grain                   | Gestation | Injector Tank         | 94.8          | 8,300            | Gal            | 786,500       |
| Oct 2016       | MO602429P<br>8000C |             | Corn grain                   | Gestation | Injector Tank         | 21.8          | 8,300            | Gal            | 180,700       |
| Oct 2016       | MO602429P<br>8000D |             | Corn grain                   | Gestation | Injector Tank         | 284.0         | 8,300            | Gal            | 2,357,550     |
| Oct 2016       | MO602430P<br>1150B |             | Soybeans                     | GDU       | Injector Tank         | 5.0           | 2,600            | Gal            | 13,000        |
| Oct 2016       | MO602430P<br>1150C |             | Soybeans                     | GDU       | Injector Tank         | 6.0           | 2,600            | Gal            | 15,600        |
| Oct 2016       | MO602430P<br>1400  |             | Soybeans                     | GDU       | Injector Tank         | 14.0          | 2,600            | Gal            | 36,400        |
| Nov 2016       | MO602420P<br>4000  |             | Corn grain                   | Gestation | Injector Tank         | 29.0          | 9,300            | Gal            | 269,750       |
| Nov 2016       | MO602421P<br>3500B |             | Soybeans                     | Gestation | Injector Tank         | 20.7          | 6,100            | Gal            | 126,100       |

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Manure Application Records - 6/2016 - 5/2017

| 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 - 6/2016 - 5/2017 (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 - 6/2016 - 5/2017

| 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 - 6/2016 - 5/2017 (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.

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**C. Planned Commercial Fertilizer Applications - 6/2016 - 5/2017**

No planned commercial fertilizer applications for the period.

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2012



**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.

*John  
HR*

6/2016 - 5/2017 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<br>bu | 0 | 60                            | 105              |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Oct 2016      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 2,600 gal/a   |  |  |  |
| Acres Covered                            | 12.3          |  |  |  |
| Total Applied                            | 31,850 gal    |  |  |  |
| Loads per Field                          | 4.9           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 100           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 109           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 69            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>bu | 0 | 60                            | 105              |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Oct 2016      |  |  |
| Manure Source                            | GDU           |  |  |
| Application Rate                         | 2,400 gal/a   |  |  |
| Acres Covered                            | 102.4         |  |  |
| Total Applied                            | 245,700 gal   |  |  |
| Loads per Field                          | 37.8          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 92            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 101           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 63            |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

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6/2016 - 5/2017 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<br>bu | 0 | 45                            | 110              |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Oct 2016      |  |  |
| Manure Source                            | GDU           |  |  |
| Application Rate                         | 2,600 gal/a   |  |  |
| Acres Covered                            | 29.5          |  |  |
| Total Applied                            | 76,700 gal    |  |  |
| Loads per Field                          | 11.8          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acre)                             | 100           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 109           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 69            |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Void  
 ER*

6/2016 - 5/2017 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<br>bu | 100 | 65                            | 85               |

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

Manure Management

|  | Application 1 | Application 2 |  |  |
|--|---------------|---------------|--|--|
| Application Time                         | Oct 2016      | Nov 2016      |  |  |
| Manure Source                            | Gestation     | Gestation     |  |  |
| Application Rate                         | 9,300 gal/a   | 9,300 gal/a   |  |  |
| Acres Covered                            | 75.6          | 29.0          |  |  |
| Total Applied                            | 703,300 gal   | 269,750 gal   |  |  |
| Loads per Field                          | 108.2         | 41.5          |  |  |
| Placement                                | Injected      | Injected      |  |  |
| N (lbs/acres)                            | 153           | 153           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 233           | 233           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 330           | 330           |  |  |

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.

*Void*  


6/2016 - 5/2017 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<br>bu | 0 | 65                            | 115              |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Nov 2016      |  |  |  |
| Manure Source                            | Gestation     |  |  |  |
| Application Rate                         | 6,100 gal/a   |  |  |  |
| Acres Covered                            | 20.7          |  |  |  |
| Total Applied                            | 126,100 gal   |  |  |  |
| Loads per Field                          | 19.4          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 101           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 153           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 217           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*VOID*  
*2/10*

6/2016 - 5/2017 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<br>bu | 0 | 65                            | 115              |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Oct 2016      |  |  |  |
| Manure Source                            | Gestation     |  |  |  |
| Application Rate                         | 6,100 gal/a   |  |  |  |
| Acres Covered                            | 18.8          |  |  |  |
| Total Applied                            | 114,400 gal   |  |  |  |
| Loads per Field                          | 17.6          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 101           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 153           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 217           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*John  
H.R.*

6/2016 - 5/2017 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<br>bu | 95 | 65                            | 45               |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Oct 2016      |  |  |
| Manure Source                            | Gestation     |  |  |
| Application Rate                         | 8,300 gal/a   |  |  |
| Acres Covered                            | 94.8          |  |  |
| Total Applied                            | 786,500 gal   |  |  |
| Loads per Field                          | 121.0         |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 137           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 208           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 295           |  |  |

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.

*John  
MKL*

6/2016 - 5/2017 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<br>bu | 95 | 65                            | 45               |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Oct 2016      |  |  |
| Manure Source                            | Gestation     |  |  |
| Application Rate                         | 8,300 gal/a   |  |  |
| Acres Covered                            | 21.8          |  |  |
| Total Applied                            | 180,700 gal   |  |  |
| Loads per Field                          | 27.8          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 137           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 208           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 295           |  |  |

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.

void  
 XR

6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 297.5 | Spreadable Acres:    | 284.0      |
| Non-Spreadable Acres: | 13.5  | 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<br>bu | 95 | 65                            | 45               |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Oct 2016      |  |  |
| Manure Source                            | Gestation     |  |  |
| Application Rate                         | 8,300 gal/a   |  |  |
| Acres Covered                            | 284.0         |  |  |
| Total Applied                            | 2,357,550 gal |  |  |
| Loads per Field                          | 362.7         |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 137           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 208           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 295           |  |  |

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.

*John*

6/2016 - 5/2017 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<br>bu | 0 | 60                            | 0                |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Oct 2016      |  |  |
| Manure Source                            | GDU           |  |  |
| Application Rate                         | 2,600 gal/a   |  |  |
| Acres Covered                            | 5.0           |  |  |
| Total Applied                            | 13,000 gal    |  |  |
| Loads per Field                          | 2.0           |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 100           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 109           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 69            |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*VOID*  
*[Signature]*

6/2016 - 5/2017 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<br>bu | 0 | 60                            | 0                |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Oct 2016      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 2,600 gal/a   |  |  |  |
| Acres Covered                            | 6.0           |  |  |  |
| Total Applied                            | 15,600 gal    |  |  |  |
| Loads per Field                          | 2.4           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 100           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 109           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 69            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Void  
 gke*

6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 0 | 60                            | 0                |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Oct 2016      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 2,600 gal/a   |  |  |  |
| Acres Covered                            | 14.0          |  |  |  |
| Total Applied                            | 36,400 gal    |  |  |  |
| Loads per Field                          | 5.6           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 100           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 109           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 69            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*void  
 HRP*

6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P3400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 20.8 | Spreadable Acres:    | 14.8       |
| Non-Spreadable Acres: | 6.0  | 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 ton      | 80 | 40                            | 30               |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Jun 2016      |  |  |  |
| Manure Source                            | Gestation     |  |  |  |
| Application Rate                         | 4,900 gal/a   |  |  |  |
| Acres Covered                            | 14.9          |  |  |  |
| Total Applied                            | 72,800 gal    |  |  |  |
| Loads per Field                          | 11.2          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 81            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 123           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 174           |  |  |  |

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.

*Void  
 HR*

Summary Tables - 6/2016 - 5/2017

F. Manure Summary: 6/2016 - 5/2017

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 2,234,250 | 255,000  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 4,611,100 | 419,250  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 4,611,100 | 419,250  |  |  |
| End of Year Inventory       | 2,181,150 | 337,750  |  |  |

G. Land Applied Nutrient Summary: 6/2016 - 5/2017

|                          | 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                | 4,611,100      | gals | 76,084           | 115,572                       | 163,860          |
| GDU                      | 419,250        | gals | 16,101           | 17,624                        | 11,061           |
| <b>Manure Total</b>      |                |      | 92,185           | 133,196                       | 174,921          |
|                          |                |      |                  |                               |                  |
|                          | 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>             |                |      | 92,185           | 133,196                       | 174,921          |

*void  
MK*

### 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       | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602420P4000  |             | 108.8      | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602421P3500B |             | 25.2       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602421P3500C |             | 19.8       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602429P8000B |             | 98.7       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000C |             | 24.1       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000D |             | 297.5      | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602430P1150B |             | 6.0        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1150C |             | 6.9        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1400  |             | 21.0       | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P3400  |             | 20.8       | 2012      | 6.6             | 5.7 | Medium    | 652        | High      | 740                                 | 0 [D]                             |

<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.

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

I. Crop Record Keeping Table: 6/2016 - 5/2017

| Field ID           | Field SubID | Crop                      | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|--------------------|-------------|---------------------------|---------------|-------------------|--------------|-----------------|---------|
| MO602419P<br>1300  |             | Soybeans                  |               |                   |              |                 |         |
| MO602419P<br>4000  |             | Soybeans                  |               |                   |              |                 |         |
| MO602420P<br>3400  |             | Soybeans                  |               |                   |              |                 |         |
| MO602420P<br>4000  |             | Corn grain                |               |                   |              |                 |         |
| MO602421P<br>3500B |             | Soybeans                  |               |                   |              |                 |         |
| MO602421P<br>3500C |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000B |             | Corn grain                |               |                   |              |                 |         |
| MO602429P<br>8000C |             | Corn grain                |               |                   |              |                 |         |
| MO602429P<br>8000D |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1150B |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>1150C |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>1400  |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>3400  |             | Cool season grass pasture |               |                   |              |                 |         |

*Voit*  
*RP*

## 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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 3/31/2015 12:49:31 PM  
Exported: 3/31/2015 12:58:54 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

### Operation:

Name: Trenton Farms RE, LLC

### Operation Contact:

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

VOID  
NR

# 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:

6/2017 - 5/2018

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:** June 2015 - May 2020

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HRE

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**A. Manure Transfers - 6/2017 - 5/2018**

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 |
|----------------|---------------|------------------|--------------------|------------------------|-------|-------|
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |

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**B. Planned Manure Applications - 6/2017 - 5/2018**

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Sep 2017       | MO602430P<br>1150B |             | Corn grain      | GDU       | Injector Tank         | 5.0           | 3,800            | Gal            | 18,850        |
| Oct 2017       | MO602419P<br>1300  |             | Corn grain      | GDU       | Injector Tank         | 12.3          | 3,800            | Gal            | 46,800        |
| Oct 2017       | MO602419P<br>4000  |             | Corn grain      | GDU       | Injector Tank         | 102.3         | 3,800            | Gal            | 388,700       |
| Oct 2017       | MO602420P<br>3400  |             | Corn grain      | Gestation | Injector Tank         | 29.4          | 9,300            | Gal            | 273,000       |
| Oct 2017       | MO602420P<br>4000  |             | Soybeans        | Gestation | Injector Tank         | 104.6         | 6,100            | Gal            | 638,300       |
| Oct 2017       | MO602421P<br>3500B |             | Corn grain      | Gestation | Injector Tank         | 21.7          | 9,300            | Gal            | 201,500       |
| Oct 2017       | MO602421P<br>3500C |             | Corn grain      | Gestation | Injector Tank         | 18.7          | 9,300            | Gal            | 174,200       |
| Oct 2017       | MO602429P<br>8000B |             | Soybeans        | Gestation | Injector Tank         | 94.8          | 4,300            | Gal            | 407,550       |
| Oct 2017       | MO602429P<br>8000C |             | Soybeans        | Gestation | Injector Tank         | 21.8          | 4,300            | Gal            | 93,600        |
| Oct 2017       | MO602429P<br>8000D |             | Soybeans        | Gestation | Injector Tank         | 284.0         | 4,300            | Gal            | 1,221,350     |
| Oct 2017       | MO602430P<br>1150C |             | Corn grain      | GDU       | Injector Tank         | 6.2           | 3,800            | Gal            | 23,400        |
| Oct 2017       | MO602430P<br>1400  |             | Corn grain      | GDU       | Injector Tank         | 14.0          | 3,800            | Gal            | 53,300        |

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Manure Application Records - 6/2017 - 5/2018

| 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 - 6/2017 - 5/2018 (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.

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Manure Application Records - 6/2017 - 5/2018

| 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 - 6/2017 - 5/2018 (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.

*Ward  
4/20*

**C. Planned Commercial Fertilizer Applications - 6/2017 - 5/2018**

No planned commercial fertilizer applications for the period.

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**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.

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6/2017 - 5/2018 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<br>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                            | GDU           |  |  |  |
| Application Rate                         | 3,800 gal/a   |  |  |  |
| Acres Covered                            | 12.3          |  |  |  |
| Total Applied                            | 46,800 gal    |  |  |  |
| Loads per Field                          | 7.2           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 146           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |  |

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.

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6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>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                            | GDU           |  |  |  |
| Application Rate                         | 3,800 gal/a   |  |  |  |
| Acres Covered                            | 102.3         |  |  |  |
| Total Applied                            | 388,700 gal   |  |  |  |
| Loads per Field                          | 59.8          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 146           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |  |

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.

*void*  
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6/2017 - 5/2018 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<br>bu | 100 | 65                            | 85               |

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                         | 9,300 gal/a   |  |  |  |
| Acres Covered                            | 29.4          |  |  |  |
| Total Applied                            | 273,000 gal   |  |  |  |
| Loads per Field                          | 42.0          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 153           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 233           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 330           |  |  |  |

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.

*Void*  


6/2017 - 5/2018 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<br>bu | 0 | 45                            | 110              |

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                            | 104.6         |  |  |  |
| Total Applied                            | 638,300 gal   |  |  |  |
| Loads per Field                          | 98.2          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 101           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 153           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 217           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Joel  
 UK*

6/2017 - 5/2018 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<br>bu | 100 | 85                            | 85               |

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                         | 9,300 gal/a   |  |  |  |
| Acres Covered                            | 21.7          |  |  |  |
| Total Applied                            | 201,500 gal   |  |  |  |
| Loads per Field                          | 31.0          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 153           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 233           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 330           |  |  |  |

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.

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6/2017 - 5/2018 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<br>bu | 100 | 85                            | 85               |

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                         | 9,300 gal/a   |  |  |  |
| Acres Covered                            | 18.7          |  |  |  |
| Total Applied                            | 174,200 gal   |  |  |  |
| Loads per Field                          | 26.8          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 153           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 233           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 330           |  |  |  |

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.

*Ug 2*  
*[Signature]*

6/2017 - 5/2018 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 |
|----------|------------------------|---|-------------------------------|------------------|
| Soybeans | 43.7999992370605<br>bu | 0 | 45                            | 75               |

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                         | 4,300 gal/a   |  |  |  |
| Acres Covered                            | 94.8          |  |  |  |
| Total Applied                            | 407,550 gal   |  |  |  |
| Loads per Field                          | 62.7          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 71            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 108           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 153           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*John  
JRE*

6/2017 - 5/2018 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<br>bu | 0 | 45                            | 75               |

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                         | 4,300 gal/a   |  |  |  |
| Acres Covered                            | 21.8          |  |  |  |
| Total Applied                            | 93,600 gal    |  |  |  |
| Loads per Field                          | 14.4          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 71            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 108           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 153           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*void*

6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 297.5 | Spreadable Acres:    | 284.0      |
| Non-Spreadable Acres: | 13.5  | 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<br>bu | 0 | 45                            | 75               |

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                         | 4,300 gal/a   |  |  |  |
| Acres Covered                            | 284.0         |  |  |  |
| Total Applied                            | 1,221,350 gal |  |  |  |
| Loads per Field                          | 187.9         |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 71            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 108           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 153           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Joie  
HRE*

6/2017 - 5/2018 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<br>bu | 100 | 80                            | 0                |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Sep 2017      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 3,800 gal/a   |  |  |  |
| Acres Covered                            | 5.0           |  |  |  |
| Total Applied                            | 18,850 gal    |  |  |  |
| Loads per Field                          | 2.9           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 146           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |  |

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.

*Void  
4/22*

6/2017 - 5/2018 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<br>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                         | 3,800 gal/a   |  |  |  |
| Acres Covered                            | 6.2           |  |  |  |
| Total Applied                            | 23,400 gal    |  |  |  |
| Loads per Field                          | 3.6           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 146           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |  |

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.

*Void MR*

6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>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                         | 3,800 gal/a   |  |  |  |
| Acres Covered                            | 14.0          |  |  |  |
| Total Applied                            | 53,300 gal    |  |  |  |
| Loads per Field                          | 8.2           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 146           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |  |

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.

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6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P3400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 20.8 | Spreadable Acres:    | 14.8       |
| Non-Spreadable Acres: | 6.0  | 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 ton      | 80 | 40                            | 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

\* 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.

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Summary Tables - 6/2017 - 5/2018

F. Manure Summary: 6/2017 - 5/2018

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 2,181,150 | 337,750  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 3,009,500 | 531,050  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 3,009,500 | 531,050  |  |  |
| End of Year Inventory       | 3,729,650 | 308,700  |  |  |

G. Land Applied Nutrient Summary: 6/2017 - 5/2018

|                          | 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                | 3,009,500 gals       | 49,687           | 75,531                            | 107,023               |
| GDU                      | 531,050 gals         | 20,411           | 22,368                            | 13,980                |
| <b>Manure Total</b>      |                      | 70,098           | 97,899                            | 121,003               |
|                          |                      |                  |                                   |                       |
|                          | <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>             |                      | 70,098           | 97,899                            | 121,003               |

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### 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       | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602420P4000  |             | 108.8      | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602421P3500B |             | 25.2       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602421P3500C |             | 19.8       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602429P8000B |             | 98.7       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000C |             | 24.1       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000D |             | 297.5      | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602430P1150B |             | 6.0        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1150C |             | 6.9        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1400  |             | 21.0       | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P3400  |             | 20.8       | 2012      | 6.6             | 5.7 | Medium    | 652        | High      | 740                                 | 0 [D]                             |

<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.

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

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I. Crop Record Keeping Table: 6/2017 - 5/2018

| Field ID           | Field SubID | Crop                      | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|--------------------|-------------|---------------------------|---------------|-------------------|--------------|-----------------|---------|
| MO602419P<br>1300  |             | Corn grain                |               |                   |              |                 |         |
| MO602419P<br>4000  |             | Corn grain                |               |                   |              |                 |         |
| MO602420P<br>3400  |             | Corn grain                |               |                   |              |                 |         |
| MO602420P<br>4000  |             | Soybeans                  |               |                   |              |                 |         |
| MO602421P<br>3500B |             | Corn grain                |               |                   |              |                 |         |
| MO602421P<br>3500C |             | Corn grain                |               |                   |              |                 |         |
| MO602429P<br>8000B |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000C |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000D |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>1150B |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1150C |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1400  |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>3400  |             | Cool season grass pasture |               |                   |              |                 |         |

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## 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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 3/31/2015 12:49:31 PM  
Exported: 3/31/2015 12:58:54 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

### Operation:

Name: Trenton Farms RE, LLC

### Operation Contact:

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

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*gme*

# 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:  
6/2018 - 5/2019

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:** June 2015 - May 2020

*Went  
N/A*

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**A. Manure Transfers - 6/2018 - 5/2019**

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 |
|----------------|---------------|------------------|--------------------|------------------------|-------|-------|
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |

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**B. Planned Manure Applications - 6/2018 - 5/2019**

| Month and Year | Field ID           | Field SubID | Planned Crop(s)           | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|---------------------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Jul 2018       | MO602430P<br>3400  |             | Cool season grass pasture | Gestation | Injector Tank         | 14.9          | 4,900            | Gal            | 72,800        |
| Sep 2018       | MO602419P<br>4000  |             | Soybeans                  | GDU       | Injector Tank         | 102.3         | 2,300            | Gal            | 235,300       |
| Oct 2018       | MO602419P<br>1300  |             | Soybeans                  | GDU       | Injector Tank         | 12.4          | 2,300            | Gal            | 28,600        |
| Oct 2018       | MO602420P<br>3400  |             | Soybeans                  | Gestation | Injector Tank         | 29.4          | 4,400            | Gal            | 129,350       |
| Oct 2018       | MO602420P<br>4000  |             | Corn grain                | Gestation | Injector Tank         | 104.6         | 8,200            | Gal            | 858,000       |
| Oct 2018       | MO602421P<br>3500B |             | Soybeans                  | Gestation | Injector Tank         | 21.7          | 4,400            | Gal            | 95,550        |
| Oct 2018       | MO602421P<br>3500C |             | Soybeans                  | Gestation | Injector Tank         | 18.8          | 4,400            | Gal            | 82,550        |
| Oct 2018       | MO602429P<br>8000B |             | Corn grain                | Gestation | Injector Tank         | 94.7          | 8,500            | Gal            | 805,350       |
| Oct 2018       | MO602429P<br>8000C |             | Corn grain                | Gestation | Injector Tank         | 21.7          | 8,500            | Gal            | 184,600       |
| Oct 2018       | MO602429P<br>8000D |             | Corn grain                | Gestation | Injector Tank         | 284.0         | 8,500            | Gal            | 2,414,100     |
| Nov 2018       | MO602430P<br>1150B |             | Soybeans                  | GDU       | Injector Tank         | 5.1           | 2,300            | Gal            | 11,700        |
| Nov 2018       | MO602430P<br>1150C |             | Soybeans                  | GDU       | Injector Tank         | 6.2           | 2,200            | Gal            | 13,650        |
| Nov 2018       | MO602430P<br>1400  |             | Soybeans                  | GDU       | Injector Tank         | 14.1          | 2,300            | Gal            | 32,500        |

2019  
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Manure Application Records - 6/2018 - 5/2019

| 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 - 6/2018 - 5/2019 (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 - 6/2018 - 5/2019

| 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 - 6/2018 - 5/2019 (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.

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**C: Planned Commercial Fertilizer Applications - 6/2018 - 5/2019**

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.

*John*

6/2018 - 5/2019 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<br>bu | 0 | 60                            | 105              |

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                         | 2,300 gal/a   |  |  |  |
| Acres Covered                            | 12.4          |  |  |  |
| Total Applied                            | 28,600 gal    |  |  |  |
| Loads per Field                          | 4.4           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 89            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 97            |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 61            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

*Void MK*

6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>bu | 0 | 60                            | 105              |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Sep 2018      |  |  |
| Manure Source                            | GDU           |  |  |
| Application Rate                         | 2,300 gal/a   |  |  |
| Acres Covered                            | 102.3         |  |  |
| Total Applied                            | 235,300 gal   |  |  |
| Loads per Field                          | 36.2          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 89            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 97            |  |  |
| K <sub>2</sub> O (lbs/acre)              | 61            |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*John  
HRC*

6/2018 - 5/2019 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<br>bu | 0 | 45                            | 110              |

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                         | 4,400 gal/a   |  |  |  |
| Acres Covered                            | 29.4          |  |  |  |
| Total Applied                            | 129,350 gal   |  |  |  |
| Loads per Field                          | 19.9          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 73            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 110           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 156           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Handwritten signature:* Vard HKE

6/2018 - 5/2019 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<br>bu | 100 | 65                            | 85               |

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                            | 104.6         |  |  |
| Total Applied                            | 858,000 gal   |  |  |
| Loads per Field                          | 132.0         |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 135           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 205           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 291           |  |  |

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.

*Voit  
 HR*

6/2018 - 5/2019 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<br>bu | 0 | 65                            | 115              |

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                         | 4,400 gal/a   |  |  |  |
| Acres Covered                            | 21.7          |  |  |  |
| Total Applied                            | 95,550 gal    |  |  |  |
| Loads per Field                          | 14.7          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 73            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 110           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 156           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*void  
MKE*

6/2018 - 5/2019 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<br>bu | 0 | 65                            | 115              |

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                         | 4,400 gal/a   |  |  |
| Acres Covered                            | 18.8          |  |  |
| Total Applied                            | 82,550 gal    |  |  |
| Loads per Field                          | 12.7          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 73            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 110           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 156           |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*U of M  
 HR*

6/2018 - 5/2019 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 |
|------------|------------------------|----|-------------------------------|------------------|
| Corn grain | 122.099998474121<br>bu | 95 | 65                            | 45               |

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                            | 94.7          |  |  |  |
| Total Applied                            | 805,350 gal   |  |  |  |
| Loads per Field                          | 123.9         |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 140           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 213           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 302           |  |  |  |

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.

*Void  
MRE*

6/2018 - 5/2019 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<br>bu | 95 | 65                            | 45               |

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                            | 21.7          |  |  |  |
| Total Applied                            | 184,600 gal   |  |  |  |
| Loads per Field                          | 28.4          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 140           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 213           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 302           |  |  |  |

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.

*VOID*  
*MCC*

6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 297.5 | Spreadable Acres:    | 284.0      |
| Non-Spreadable Acres: | 13.5  | 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<br>bu | 95 | 65                            | 45               |

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                            | 284.0         |  |  |
| Total Applied                            | 2,414,100 gal |  |  |
| Loads per Field                          | 371.4         |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 140           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 213           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 302           |  |  |

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.

*VOID  
 HERE*

6/2018 - 5/2019 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<br>bu | 0 | 60                            | 0                |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Nov 2018      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 2,300 gal/a   |  |  |  |
| Acres Covered                            | 5.1           |  |  |  |
| Total Applied                            | 11,700 gal    |  |  |  |
| Loads per Field                          | 1.8           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 89            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 97            |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 61            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*10/16  
 YR*

6/2018 - 5/2019 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<br>bu | 0 | 60                            | 0                |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Nov 2018      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 2,200 gal/a   |  |  |  |
| Acres Covered                            | 6.2           |  |  |  |
| Total Applied                            | 13,650 gal    |  |  |  |
| Loads per Field                          | 2.1           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acre)                             | 85            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 92            |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 58            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Void  
 MRE*

6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 0 | 60                            | 0                |

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

Manure Management

|  | Application 1 |  |  |
|--|---------------|--|--|
| Application Time                         | Nov 2018      |  |  |
| Manure Source                            | GDU           |  |  |
| Application Rate                         | 2,300 gal/a   |  |  |
| Acres Covered                            | 14.1          |  |  |
| Total Applied                            | 32,500 gal    |  |  |
| Loads per Field                          | 5.0           |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 89            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 97            |  |  |
| K <sub>2</sub> O (lbs/acre)              | 61            |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*VOID*  
*9/10/15*

6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P3400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 20.8 | Spreadable Acres:    | 14.8       |
| Non-Spreadable Acres: | 6.0  | 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 ton      | 80 | 40                            | 30               |

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                         | 4,900 gal/a   |  |  |  |
| Acres Covered                            | 14.9          |  |  |  |
| Total Applied                            | 72,800 gal    |  |  |  |
| Loads per Field                          | 11.2          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 81            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 123           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 174           |  |  |  |

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.

*Unit  
 MK*

Summary Tables - 6/2018 - 5/2019

F. Manure Summary: 6/2018 - 5/2019

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 3,729,650 | 308,700  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 4,642,300 | 321,750  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 4,642,300 | 321,750  |  |  |
| End of Year Inventory       | 3,645,350 | 488,950  |  |  |

G. Land Applied Nutrient Summary: 6/2018 - 5/2019

|                          | 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                | 4,642,300 gals | 76,486           | 116,250                       | 164,856          |
| GDU                      | 321,750 gals   | 12,445           | 13,559                        | 8,527            |
| <b>Manure Total</b>      |                | 88,931           | 129,809                       | 173,383          |
|                          |                |                  |                               |                  |
|                          | 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>             |                | 88,931           | 129,809                       | 173,383          |

*VOID HERE*

### 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       | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602420P4000  |             | 108.8      | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602421P3500B |             | 25.2       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602421P3500C |             | 19.8       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602429P8000B |             | 98.7       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000C |             | 24.1       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000D |             | 297.5      | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602430P1150B |             | 6.0        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1150C |             | 6.9        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1400  |             | 21.0       | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P3400  |             | 20.8       | 2012      | 6.6             | 5.7 | Medium    | 652        | High      | 740                                 | 0 [D]                             |

<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.

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

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I. Crop Record Keeping Table: 6/2018 - 5/2019

| Field ID           | Field SubID | Crop                      | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|--------------------|-------------|---------------------------|---------------|-------------------|--------------|-----------------|---------|
| MO602419P<br>1300  |             | Soybeans                  |               |                   |              |                 |         |
| MO602419P<br>4000  |             | Soybeans                  |               |                   |              |                 |         |
| MO602420P<br>3400  |             | Soybeans                  |               |                   |              |                 |         |
| MO602420P<br>4000  |             | Corn grain                |               |                   |              |                 |         |
| MO602421P<br>3500B |             | Soybeans                  |               |                   |              |                 |         |
| MO602421P<br>3500C |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000B |             | Corn grain                |               |                   |              |                 |         |
| MO602429P<br>8000C |             | Corn grain                |               |                   |              |                 |         |
| MO602429P<br>8000D |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1150B |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>1150C |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>1400  |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>3400  |             | Cool season grass pasture |               |                   |              |                 |         |

*Very OK*

**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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 3/31/2015 12:49:31 PM  
Exported: 3/31/2015 12:58:54 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

**Operation:**

Name: Trenton Farms RE, LLC

**Operation Contact:**

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

*Visit  
HP*

# 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:  
6/2019 - 5/2020

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:** June 2015 - May 2020

*void  
RE*

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*John  
AR*

**A. Manure Transfers - 6/2019 - 5/2020**

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 |
|----------------|---------------|------------------|--------------------|------------------------|-------|-------|
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |
|                |               |                  |                    |                        |       |       |

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**B. Planned Manure Applications - 6/2019 - 5/2020**

| Month and Year | Field ID           | Field SubID | Planned Crop(s)              | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|------------------------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Sep 2019       | MO602419P<br>1300  |             | Corn grain                   | GDU       | Injector Tank         | 12.3          | 3,800            | Gal            | 46,800        |
| Oct 2019       | MO602419P<br>4000  |             | Corn grain                   | GDU       | Injector Tank         | 102.3         | 3,800            | Gal            | 388,700       |
| Oct 2019       | MO602420P<br>3400  |             | Corn grain                   | Gestation | Injector Tank         | 29.4          | 8,500            | Gal            | 249,600       |
| Oct 2019       | MO602420P<br>4000  |             | Soybeans                     | Gestation | Injector Tank         | 104.7         | 4,600            | Gal            | 481,650       |
| Oct 2019       | MO602421P<br>3500B |             | Corn grain                   | Gestation | Injector Tank         | 21.6          | 8,500            | Gal            | 183,950       |
| Oct 2019       | MO602421P<br>3500C |             | Corn grain                   | Gestation | Injector Tank         | 18.7          | 8,500            | Gal            | 159,250       |
| Oct 2019       | MO602429P<br>8000B |             | Soybeans                     | Gestation | Injector Tank         | 94.7          | 4,200            | Gal            | 397,800       |
| Oct 2019       | MO602429P<br>8000C |             | Soybeans                     | Gestation | Injector Tank         | 21.8          | 4,200            | Gal            | 91,650        |
| Oct 2019       | MO602429P<br>8000D |             | Soybeans                     | Gestation | Injector Tank         | 284.1         | 4,200            | Gal            | 1,193,400     |
| Oct 2019       | MO602430P<br>1150B |             | Corn grain                   | GDU       | Injector Tank         | 5.0           | 3,800            | Gal            | 18,850        |
| Oct 2019       | MO602430P<br>1150C |             | Corn grain                   | GDU       | Injector Tank         | 6.2           | 3,800            | Gal            | 23,400        |
| May 2020       | MO602430P<br>3400  |             | Cool season<br>grass pasture | Gestation | Injector Tank         | 14.9          | 4,900            | Gal            | 72,800        |

*VOID*  
*gke*

Manure Application Records - 6/2019 - 5/2020

| 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 - 6/2019 - 5/2020 (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.

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Manure Application Records - 6/2019 - 5/2020

| 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 - 6/2019 - 5/2020 (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.

*2016  
 HRE*

**C. Planned Commercial Fertilizer Applications - 6/2019 - 5/2020**

No planned commercial fertilizer applications for the period.

*Void*  
*side*



**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.

*void etc*

6/2019 - 5/2020 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<br>bu | 100 | 75                            | 80               |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Sep 2019      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 3,800 gal/a   |  |  |  |
| Acres Covered                            | 12.3          |  |  |  |
| Total Applied                            | 46,800 gal    |  |  |  |
| Loads per Field                          | 7.2           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acre)                             | 146           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |  |

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.

*Void  
MRE*

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>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                            | GDU           |  |  |
| Application Rate                         | 3,800 gal/a   |  |  |
| Acres Covered                            | 102.3         |  |  |
| Total Applied                            | 388,700 gal   |  |  |
| Loads per Field                          | 59.8          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 146           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |

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.

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 APE*

6/2019 - 5/2020 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<br>bu | 100 | 65                            | 85               |

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                            | 29.4          |  |  |
| Total Applied                            | 249,600 gal   |  |  |
| Loads per Field                          | 38.4          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 140           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 213           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 302           |  |  |

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.

*Void ME*

6/2019 - 5/2020 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<br>bu | 0 | 45                            | 110              |

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                         | 4,600 gal/a   |  |  |
| Acres Covered                            | 104.7         |  |  |
| Total Applied                            | 481,650 gal   |  |  |
| Loads per Field                          | 74.1          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 76            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 115           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 163           |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

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6/2019 - 5/2020 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<br>bu | 100 | 85                            | 85               |

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                            | 21.6          |  |  |
| Total Applied                            | 183,950 gal   |  |  |
| Loads per Field                          | 28.3          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 140           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 213           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 302           |  |  |

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.

*void up*

6/2019 - 5/2020 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<br>bu | 100 | 85                            | 85               |

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                            | 18.7          |  |  |
| Total Applied                            | 159,250 gal   |  |  |
| Loads per Field                          | 24.5          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 140           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 213           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 302           |  |  |

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.

VOID  
 P 1011  
 HRP

6/2019 - 5/2020 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 |
|----------|------------------------|---|-------------------------------|------------------|
| Soybeans | 43.7999992370605<br>bu | 0 | 45                            | 75               |

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                         | 4,200 gal/a   |  |  |
| Acres Covered                            | 94.7          |  |  |
| Total Applied                            | 397,800 gal   |  |  |
| Loads per Field                          | 61.2          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 69            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 105           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 149           |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*1017  
 P10  
 480*

6/2019 - 5/2020 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<br>bu | 0 | 45                            | 75               |

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                         | 4,200 gal/a   |  |  |
| Acres Covered                            | 21.8          |  |  |
| Total Applied                            | 91,650 gal    |  |  |
| Loads per Field                          | 14.1          |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 69            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 105           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 149           |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Void  
 MR*

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602429P8000D

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 297.5 | Spreadable Acres:    | 284.0      |
| Non-Spreadable Acres: | 13.5  | 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<br>bu | 0 | 45                            | 75               |

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                         | 4,200 gal/a   |  |  |
| Acres Covered                            | 284.1         |  |  |
| Total Applied                            | 1,193,400 gal |  |  |
| Loads per Field                          | 183.6         |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 69            |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 105           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 149           |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

*Void*

6/2019 - 5/2020 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<br>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                         | 3,800 gal/a   |  |  |
| Acres Covered                            | 5.0           |  |  |
| Total Applied                            | 18,850 gal    |  |  |
| Loads per Field                          | 2.9           |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 146           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |

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.

*Handwritten signature*

6/2019 - 5/2020 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<br>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                         | 3,800 gal/a   |  |  |
| Acres Covered                            | 6.2           |  |  |
| Total Applied                            | 23,400 gal    |  |  |
| Loads per Field                          | 3.6           |  |  |
| Placement                                | Injected      |  |  |
| N (lbs/acres)                            | 146           |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |
| K <sub>2</sub> O (lbs/acre)              | 100           |  |  |

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.

*Handwritten:* 10/17/19

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 100 | 80                            | 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

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

*VOID*  
*MR*

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P3400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 20.8 | Spreadable Acres:    | 14.8       |
| Non-Spreadable Acres: | 6.0  | 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 ton      | 80 | 40                            | 30               |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | May 2020      |  |  |  |
| Manure Source                            | Gestation     |  |  |  |
| Application Rate                         | 4,900 gal/a   |  |  |  |
| Acres Covered                            | 14.9          |  |  |  |
| Total Applied                            | 72,800 gal    |  |  |  |
| Loads per Field                          | 11.2          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 81            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 123           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 174           |  |  |  |

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.

*VOID*

Summary Tables - 6/2019 - 5/2020

F. Manure Summary: 6/2019 - 5/2020

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 3,645,350 | 488,950  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 2,830,100 | 477,750  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 2,830,100 | 477,750  |  |  |
| End of Year Inventory       | 5,373,250 | 513,200  |  |  |

G. Land Applied Nutrient Summary: 6/2019 - 5/2020

|                          | 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                | 2,830,100      | gals | 46,563           | 70,782                        | 100,397          |
| GDU                      | 477,750        | gals | 18,367           | 20,128                        | 12,580           |
| <b>Manure Total</b>      |                |      | 64,930           | 90,910                        | 112,977          |
|                          |                |      |                  |                               |                  |
|                          | 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>             |                |      | 64,930           | 90,910                        | 112,977          |

*Void  
 MK*

### 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       | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602420P4000  |             | 108.8      | 2012      | 7.0             | 6.1 | High      | 384        | High      | 1,370                               | 0 [D]                             |
| MO602421P3500B |             | 25.2       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602421P3500C |             | 19.8       | 2012      | 7.1             | 6.2 | High      | 400        | High      | 1,170                               | 0 [D]                             |
| MO602429P8000B |             | 98.7       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000C |             | 24.1       | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602429P8000D |             | 297.5      | 2012      | 7.2             | 6.3 | High      | 566        | High      | 905                                 | 0 [D]                             |
| MO602430P1150B |             | 6.0        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1150C |             | 6.9        | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P1400  |             | 21.0       | 2012      | 7.1             | 6.5 | High      | 566        | High      | 0                                   | 0                                 |
| MO602430P3400  |             | 20.8       | 2012      | 6.6             | 5.7 | Medium    | 652        | High      | 740                                 | 0 [D]                             |

<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.

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

*VOID*

I. Crop Record Keeping Table: 6/2019 - 5/2020

| Field ID           | Field SubID | Crop                      | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|--------------------|-------------|---------------------------|---------------|-------------------|--------------|-----------------|---------|
| MO602419P<br>1300  |             | Corn grain                |               |                   |              |                 |         |
| MO602419P<br>4000  |             | Corn grain                |               |                   |              |                 |         |
| MO602420P<br>3400  |             | Corn grain                |               |                   |              |                 |         |
| MO602420P<br>4000  |             | Soybeans                  |               |                   |              |                 |         |
| MO602421P<br>3500B |             | Corn grain                |               |                   |              |                 |         |
| MO602421P<br>3500C |             | Corn grain                |               |                   |              |                 |         |
| MO602429P<br>8000B |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000C |             | Soybeans                  |               |                   |              |                 |         |
| MO602429P<br>8000D |             | Soybeans                  |               |                   |              |                 |         |
| MO602430P<br>1150B |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1150C |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>1400  |             | Corn grain                |               |                   |              |                 |         |
| MO602430P<br>3400  |             | Cool season grass pasture |               |                   |              |                 |         |

VOID

### 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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 3/31/2015 12:49:31 PM  
Exported: 3/31/2015 12:58:54 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

**Operation:**

Name: Trenton Farms RE, LLC

**Operation Contact:**

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

VOID  
MR

# 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:

6/2015 - 5/2016

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:** June 2015 - May 2020

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**A. Manure Transfers - 6/2015 - 5/2016**

**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 - 6/2015 - 5/2016**

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Oct 2015       | MO602419P<br>4000  |             | Corn grain      | GDU       | Injector Tank         | 61.8          | 4,000            | Gal            | 247,000       |
| Oct 2015       | MO602429P<br>8000B |             | Soybeans        | Gestation | Injector Tank         | 94.8          | 5,800            | Gal            | 549,900       |
| Oct 2015       | MO602429P<br>8000C |             | Soybeans        | Gestation | Injector Tank         | 21.7          | 5,800            | Gal            | 126,100       |
| Oct 2015       | MO602429P<br>8000D |             | Soybeans        | Gestation | Injector Tank         | 225.0         | 5,800            | Gal            | 1,305,200     |
| Nov 2015       | MO602429P<br>8000D |             | Soybeans        | Gestation | Injector Tank         | 59.1          | 5,800            | Gal            | 342,550       |

**Manure Application Records - 6/2015 - 5/2016**

| 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 - 6/2015 - 5/2016 (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.

**C. Planned Commercial Fertilizer Applications - 6/2015 - 5/2016**

No planned commercial fertilizer applications for the period.

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#### 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.

6/2015 - 5/2016 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<br>bu | 100 | 75                            | 80               |

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.

**6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P4000**

**Field Information**

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>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 2015      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 4,000 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 61.8          |  |  |  |
| <b>Total Applied</b>                         | 247,000 gal   |  |  |  |
| <b>Loads per Field</b>                       | 38.0          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 154           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 168           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 106           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2015 - 5/2016 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<br>bu | 130 | 70                            | 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.

6/2015 - 5/2016 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<br>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.

6/2015 - 5/2016 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<br>bu | 130 | 80                            | 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.

6/2015 - 5/2016 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<br>bu | 125 | 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.

**6/2015 - 5/2016 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<br>bu | 0 | 100                           | 55               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2015      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 5,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 94.8          |  |  |  |
| <b>Total Applied</b>                         | 549,900 gal   |  |  |  |
| <b>Loads per Field</b>                       | 84.6          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 96            |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 145           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 206           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2015 - 5/2016 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<br>bu | 0 | 75                            | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2015      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 5,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.7          |  |  |  |
| <b>Total Applied</b>                         | 126,100 gal   |  |  |  |
| <b>Loads per Field</b>                       | 19.4          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 96            |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 145           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 206           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2015 - 5/2016 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<br>bu | 0 | 40                            | 0                |

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 2015      | Nov 2015      |  |  |
| <b>Manure Source</b>                         | Gestation     | Gestation     |  |  |
| <b>Application Rate</b>                      | 5,800 gal/a   | 5,800 gal/a   |  |  |
| <b>Acres Covered</b>                         | 225.0         | 59.1          |  |  |
| <b>Total Applied</b>                         | 1,305,200 gal | 342,550 gal   |  |  |
| <b>Loads per Field</b>                       | 200.8         | 52.7          |  |  |
| <b>Placement</b>                             | Injected      | Injected      |  |  |
| <b>N (lbs/acres)</b>                         | 96            | 96            |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 145           | 145           |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 206           | 206           |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2015 - 5/2016 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<br>bu | 100 | 80                            | 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.

6/2015 - 5/2016 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<br>bu | 130 | 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.

6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 100 | 80                            | 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.

**6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 1.0 | 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.



**6/2015 - 5/2016 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<br>bu | 130 | 80                            | 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.

**6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P3000C**

**Field Information**

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 3.9 | Spreadable Acres:    | 0.7        |
| 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 | 122.099998474121<br>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.

6/2015 - 5/2016 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<br>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.

6/2015 - 5/2016 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<br>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.

6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4200

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 11.3 | Spreadable Acres:    | 2.4        |
| Non-Spreadable Acres: | 8.9  | 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<br>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.

6/2015 - 5/2016 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4300

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 17.1 | Spreadable Acres:    | 7.2        |
| Non-Spreadable Acres: | 9.9  | 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<br>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.

6/2015 - 5/2016 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<br>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.

Summary Tables - 6/2015 - 5/2016

F. Manure Summary: 6/2015 - 5/2016

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 0         | 0        |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 2,323,750 | 247,000  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 2,323,750 | 247,000  |  |  |
| End of Year Inventory       | 2,234,250 | 255,000  |  |  |

G. Land Applied Nutrient Summary: 6/2015 - 5/2016

|                          | 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                | 2,323,750 gals | 38,458           | 58,087                        | 82,524           |
| GDU                      | 247,000 gals   | 9,517            | 10,382                        | 6,551            |
| <b>Manure Total</b>      |                | 47,975           | 68,469                        | 89,075           |
|                          |                |                  |                               |                  |
|                          | 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>             |                | 47,975           | 68,469                        | 89,075           |

## 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                                 |
|                |             | 1.0        | 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]                             |

<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: 6/2015 - 5/2016**

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

| Field ID          | Field SubID | Crop     | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|-------------------|-------------|----------|---------------|-------------------|--------------|-----------------|---------|
| 8000E             |             |          |               |                   |              |                 |         |
| MO602430P<br>4200 |             | Soybeans |               |                   |              |                 |         |
| MO602430P<br>4300 |             | Soybeans |               |                   |              |                 |         |
| MO602430P<br>4400 |             | Soybeans |               |                   |              |                 |         |

**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\Original MMP 2015.mmp

Initialized: 11/6/2008

Last Saved: 6/3/2015 5:00:06 PM

Exported: 6/3/2015 5:03:14 PM

Title:

Years in Plan: 5

Plan Start Year: 2015

Plan Start Month: 6

**Operation:**

Name: Trenton Farms RE, LLC

**Operation Contact:**

Trenton Farms RE, LLC

SW State Highway W

Trenton MO 64683

507-825-7032 (office)

(home)

# 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:

6/2016 - 5/2017

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:** June 2015 - May 2020

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**A. Manure Transfers - 6/2016 - 5/2017**

**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 - 6/2016 - 5/2017**

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Oct 2016       | MO602419P<br>1300  |             | Soybeans        | GDU       | Injector Tank         | 12.3          | 2,600            | Gal            | 31,850        |
| Oct 2016       | MO602419P<br>3000B |             | Soybeans        | Gestation | Injector Tank         | 9.2           | 7,900            | Gal            | 72,800        |
| Oct 2016       | MO602419P<br>3000C |             | Soybeans        | GDU       | Injector Tank         | 0.8           | 3,300            | Gal            | 2,600         |
| Oct 2016       | MO602419P<br>3000D |             | Soybeans        | GDU       | Injector Tank         | 1.9           | 3,400            | Gal            | 6,500         |
| Oct 2016       | MO602419P<br>4000  |             | Soybeans        | GDU       | Injector Tank         | 102.4         | 2,400            | Gal            | 245,700       |
| Oct 2016       | MO602420P<br>3400  |             | Soybeans        | GDU       | Injector Tank         | 29.5          | 2,600            | Gal            | 76,700        |
| Oct 2016       | MO602420P<br>4000  |             | Corn grain      | Gestation | Injector Tank         | 75.6          | 9,300            | Gal            | 703,300       |
| Oct 2016       | MO602421P<br>3500C |             | Soybeans        | Gestation | Injector Tank         | 18.8          | 6,100            | Gal            | 114,400       |
| Oct 2016       | MO602429P<br>8000B |             | Corn grain      | Gestation | Injector Tank         | 94.8          | 8,300            | Gal            | 786,500       |
| Oct 2016       | MO602429P<br>8000C |             | Corn grain      | Gestation | Injector Tank         | 21.8          | 8,300            | Gal            | 180,700       |
| Oct 2016       | MO602429P<br>8000D |             | Corn grain      | Gestation | Injector Tank         | 284.0         | 8,300            | Gal            | 2,357,550     |
| Oct 2016       | MO602430P<br>1150B |             | Soybeans        | GDU       | Injector Tank         | 5.0           | 2,600            | Gal            | 13,000        |
| Oct 2016       | MO602430P<br>1150C |             | Soybeans        | GDU       | Injector Tank         | 6.0           | 2,600            | Gal            | 15,600        |
| Oct 2016       | MO602430P<br>1400  |             | Soybeans        | GDU       | Injector Tank         | 14.0          | 2,600            | Gal            | 36,400        |
| Oct 2016       | MO602430P<br>4200  |             | Corn grain      | GDU       | Injector Tank         | 2.4           | 4,000            | Gal            | 9,750         |

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Oct 2016       | MO602430P<br>4300  |             | Corn grain      | GDU       | Injector Tank         | 7.3           | 4,000            | Gal            | 29,250        |
| Oct 2016       | MO602430P<br>4400  |             | Corn grain      | GDU       | Injector Tank         | 8.6           | 4,000            | Gal            | 34,450        |
| Nov 2016       | MO602420P<br>4000  |             | Corn grain      | Gestation | Injector Tank         | 29.0          | 9,300            | Gal            | 269,750       |
| Nov 2016       | MO602421P<br>3500B |             | Soybeans        | Gestation | Injector Tank         | 20.7          | 6,100            | Gal            | 126,100       |

**Manure Application Records - 6/2016 - 5/2017**

| 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 - 6/2016 - 5/2017 (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 - 6/2016 - 5/2017**

| 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 - 6/2016 - 5/2017 (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 - 6/2016 - 5/2017**

| 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 - 6/2016 - 5/2017 (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 - 6/2016 - 5/2017**

No planned commercial fertilizer applications for the period.

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#### 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.

**6/2016 - 5/2017 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<br>bu | 0 | 60                            | 105              |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,600 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 12.3          |  |  |  |
| <b>Total Applied</b>                         | 31,850 gal    |  |  |  |
| <b>Loads per Field</b>                       | 4.9           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 100           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 109           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 69            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

Field Information

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>bu | 0 | 60                            | 105              |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Oct 2016      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 2,400 gal/a   |  |  |  |
| Acres Covered                            | 102.4         |  |  |  |
| Total Applied                            | 245,700 gal   |  |  |  |
| Loads per Field                          | 37.8          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 92            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 101           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 63            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**6/2016 - 5/2017 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<br>bu | 0 | 50                            | 40               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,600 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 29.5          |  |  |  |
| <b>Total Applied</b>                         | 76,700 gal    |  |  |  |
| <b>Loads per Field</b>                       | 11.8          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 100           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 109           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 69            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2016 - 5/2017 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<br>bu | 130 | 85                            | 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 2016      | Nov 2016      |  |  |
| <b>Manure Source</b>                         | Gestation     | Gestation     |  |  |
| <b>Application Rate</b>                      | 9,300 gal/a   | 9,300 gal/a   |  |  |
| <b>Acres Covered</b>                         | 75.6          | 29.0          |  |  |
| <b>Total Applied</b>                         | 703,300 gal   | 269,750 gal   |  |  |
| <b>Loads per Field</b>                       | 108.2         | 41.5          |  |  |
| <b>Placement</b>                             | Injected      | Injected      |  |  |
| <b>N (lbs/acres)</b>                         | 153           | 153           |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 233           | 233           |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 330           | 330           |  |  |

**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.

**6/2016 - 5/2017 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<br>bu | 0 | 60                            | 40               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Nov 2016      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 6,100 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 20.7          |  |  |  |
| <b>Total Applied</b>                         | 126,100 gal   |  |  |  |
| <b>Loads per Field</b>                       | 19.4          |  |  |  |
| <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>             | 217           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2016 - 5/2017 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<br>bu | 0 | 0                             | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 6,100 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 18.8          |  |  |  |
| <b>Total Applied</b>                         | 114,400 gal   |  |  |  |
| <b>Loads per Field</b>                       | 17.6          |  |  |  |
| <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>             | 217           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2016 - 5/2017 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<br>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>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 8,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 94.8          |  |  |  |
| <b>Total Applied</b>                         | 786,500 gal   |  |  |  |
| <b>Loads per Field</b>                       | 121.0         |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 137           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 208           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 295           |  |  |  |

**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.

6/2016 - 5/2017 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<br>bu | 130 | 95                            | 15               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 8,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.8          |  |  |  |
| <b>Total Applied</b>                         | 180,700 gal   |  |  |  |
| <b>Loads per Field</b>                       | 27.8          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 137           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 208           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 295           |  |  |  |

**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.

**6/2016 - 5/2017 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<br>bu | 130 | 55                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 8,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 284.0         |  |  |  |
| <b>Total Applied</b>                         | 2,357,550 gal |  |  |  |
| <b>Loads per Field</b>                       | 362.7         |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 137           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 208           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 295           |  |  |  |

**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.

**6/2016 - 5/2017 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<br>bu | 0 | 60                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,600 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 5.0           |  |  |  |
| <b>Total Applied</b>                         | 13,000 gal    |  |  |  |
| <b>Loads per Field</b>                       | 2.0           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 100           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 109           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 69            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2016 - 5/2017 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<br>bu | 0 | 55                            | 40               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,600 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 6.0           |  |  |  |
| <b>Total Applied</b>                         | 15,600 gal    |  |  |  |
| <b>Loads per Field</b>                       | 2.4           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 100           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 109           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 69            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P1400**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 0 | 60                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,600 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 14.0          |  |  |  |
| <b>Total Applied</b>                         | 36,400 gal    |  |  |  |
| <b>Loads per Field</b>                       | 5.6           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 100           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 109           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 69            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 1.0 | 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.



**6/2016 - 5/2017 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<br>bu | 0 | 60                            | 40               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 7,900 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 9.2           |  |  |  |
| <b>Total Applied</b>                         | 72,800 gal    |  |  |  |
| <b>Loads per Field</b>                       | 11.2          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 130           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 198           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 280           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000C

Field Information

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 3.9 | Spreadable Acres:    | 0.7        |
| 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 | 43.7999992370605<br>bu | 0 | 65                            | 25               |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Oct 2016      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 3,300 gal/a   |  |  |  |
| Acres Covered                            | 0.8           |  |  |  |
| Total Applied                            | 2,600 gal     |  |  |  |
| Loads per Field                          | 0.4           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 127           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 139           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 87            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**6/2016 - 5/2017 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<br>bu | 0 | 65                            | 50               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 1.9           |  |  |  |
| <b>Total Applied</b>                         | 6,500 gal     |  |  |  |
| <b>Loads per Field</b>                       | 1.0           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 131           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 143           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 90            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2016 - 5/2017 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<br>bu | 130 | 105                           | 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.

Crop Management

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

**6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4200**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 11.3 | Spreadable Acres:    | 2.4        |
| Non-Spreadable Acres: | 8.9  | 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<br>bu | 140 | 75                            | 20               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 4,000 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 2.4           |  |  |  |
| <b>Total Applied</b>                         | 9,750 gal     |  |  |  |
| <b>Loads per Field</b>                       | 1.5           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 154           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 168           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 106           |  |  |  |

**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.

**6/2016 - 5/2017 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4300**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 17.1 | Spreadable Acres:    | 7.2        |
| Non-Spreadable Acres: | 9.9  | 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<br>bu | 140 | 70                            | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 4,000 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 7.3           |  |  |  |
| <b>Total Applied</b>                         | 29,250 gal    |  |  |  |
| <b>Loads per Field</b>                       | 4.5           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 154           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 168           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 106           |  |  |  |

**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.

**6/2016 - 5/2017 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<br>bu | 125 | 115                           | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2016      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 4,000 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 8.6           |  |  |  |
| <b>Total Applied</b>                         | 34,450 gal    |  |  |  |
| <b>Loads per Field</b>                       | 5.3           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 154           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 168           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 106           |  |  |  |

**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.

Summary Tables - 6/2016 - 5/2017

F. Manure Summary: 6/2016 - 5/2017

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 2,234,250 | 255,000  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 4,611,100 | 501,800  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 4,611,100 | 501,800  |  |  |
| End of Year Inventory       | 2,181,150 | 255,200  |  |  |

G. Land Applied Nutrient Summary: 6/2016 - 5/2017

|                          | 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                | 4,611,100 gals | 76,073           | 115,561                       | 163,843          |
| GDU                      | 501,800 gals   | 19,270           | 21,081                        | 13,242           |
| <b>Manure Total</b>      |                | 95,343           | 136,642                       | 177,085          |
|                          |                |                  |                               |                  |
|                          | 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>             |                | 95,343           | 136,642                       | 177,085          |

## 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                                 |
|                |             | 1.0        | 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]                             |

<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: 6/2016 - 5/2017**

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

| Field ID          | Field SubID | Crop       | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|-------------------|-------------|------------|---------------|-------------------|--------------|-----------------|---------|
| 8000E             |             |            |               |                   |              |                 |         |
| MO602430P<br>4200 |             | Corn grain |               |                   |              |                 |         |
| MO602430P<br>4300 |             | Corn grain |               |                   |              |                 |         |
| MO602430P<br>4400 |             | Corn grain |               |                   |              |                 |         |

**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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 6/3/2015 5:00:06 PM  
Exported: 6/3/2015 5:03:14 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

**Operation:**

Name: Trenton Farms RE, LLC

**Operation Contact:**

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

# 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:

6/2017 - 5/2018

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:** June 2015 - May 2020

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**A. Manure Transfers - 6/2017 - 5/2018**

**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 - 6/2017 - 5/2018**

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Sep 2017       | MO602430P<br>1150B |             | Corn grain      | GDU       | Injector Tank         | 5.0           | 3,800            | Gal            | 18,850        |
| Oct 2017       | MO602419P<br>1300  |             | Corn grain      | GDU       | Injector Tank         | 12.3          | 3,800            | Gal            | 46,800        |
| Oct 2017       | MO602419P<br>4000  |             | Corn grain      | GDU       | Injector Tank         | 102.3         | 3,800            | Gal            | 388,700       |
| Oct 2017       | MO602420P<br>3400  |             | Corn grain      | Gestation | Injector Tank         | 29.4          | 9,300            | Gal            | 273,000       |
| Oct 2017       | MO602420P<br>4000  |             | Soybeans        | Gestation | Injector Tank         | 104.6         | 6,100            | Gal            | 638,300       |
| Oct 2017       | MO602421P<br>3500B |             | Corn grain      | Gestation | Injector Tank         | 21.7          | 9,300            | Gal            | 201,500       |
| Oct 2017       | MO602421P<br>3500C |             | Corn grain      | Gestation | Injector Tank         | 18.7          | 9,300            | Gal            | 174,200       |
| Oct 2017       | MO602429P<br>8000B |             | Soybeans        | Gestation | Injector Tank         | 94.8          | 6,700            | Gal            | 635,050       |
| Oct 2017       | MO602429P<br>8000C |             | Soybeans        | Gestation | Injector Tank         | 21.7          | 6,400            | Gal            | 139,100       |
| Oct 2017       | MO602429P<br>8000D |             | Soybeans        | Gestation | Injector Tank         | 168.3         | 5,400            | Gal            | 908,700       |
| Oct 2017       | MO602429P<br>8000E |             | Soybeans        | Gestation | Injector Tank         | 99.0          | 7,900            | Gal            | 781,950       |
| Oct 2017       | MO602430P<br>1150C |             | Corn grain      | GDU       | Injector Tank         | 6.2           | 3,800            | Gal            | 23,400        |
| Oct 2017       | MO602430P<br>1400  |             | Corn grain      | GDU       | Injector Tank         | 6.5           | 3,800            | Gal            | 24,700        |
| Oct 2017       | MO602430P<br>4200  |             | Soybeans        | Gestation | Injector Tank         | 2.5           | 7,600            | Gal            | 18,850        |
| Oct 2017       | MO602430P<br>4300  |             | Soybeans        | Gestation | Injector Tank         | 7.3           | 7,600            | Gal            | 55,250        |

| <b>Month and Year</b> | <b>Field ID</b>   | <b>Field SubID</b> | <b>Planned Crop(s)</b> | <b>Source</b> | <b>Application Equipment</b> | <b>Acres Covered</b> | <b>Application Rate</b> | <b>Units per acre</b> | <b>Total Applied</b> |
|-----------------------|-------------------|--------------------|------------------------|---------------|------------------------------|----------------------|-------------------------|-----------------------|----------------------|
| Oct 2017              | MO602430P<br>4400 |                    | Soybeans               | Gestation     | Injector Tank                | 31.0                 | 7,400                   | Gal                   | 229,450              |



**Manure Application Records - 6/2017 - 5/2018**

| 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 - 6/2017 - 5/2018 (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 - 6/2017 - 5/2018**

| 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 - 6/2017 - 5/2018 (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.

**Manure Application Records - 6/2017 - 5/2018**

| 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 - 6/2017 - 5/2018 (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 |
|-------|-------------------|-----------------------------|---------------------------|----------------------------------|----------|------------|----------------|--------------------------|-------------------------|----------------------|
| 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 - 6/2017 - 5/2018**

No planned commercial fertilizer applications for the period.

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**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.

**6/2017 - 5/2018 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<br>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 2017      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 12.3          |  |  |  |
| <b>Total Applied</b>                         | 46,800 gal    |  |  |  |
| <b>Loads per Field</b>                       | 7.2           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

**6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P4000**

**Field Information**

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>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 2017      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 102.3         |  |  |  |
| <b>Total Applied</b>                         | 388,700 gal   |  |  |  |
| <b>Loads per Field</b>                       | 59.8          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

**6/2017 - 5/2018 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<br>bu | 130 | 70                            | 20               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 9,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 29.4          |  |  |  |
| <b>Total Applied</b>                         | 273,000 gal   |  |  |  |
| <b>Loads per Field</b>                       | 42.0          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 153           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 233           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 330           |  |  |  |

**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.

**6/2017 - 5/2018 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<br>bu | 0 | 70                            | 45               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 6,100 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 104.6         |  |  |  |
| <b>Total Applied</b>                         | 638,300 gal   |  |  |  |
| <b>Loads per Field</b>                       | 98.2          |  |  |  |
| <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>             | 217           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2017 - 5/2018 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<br>bu | 130 | 80                            | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 9,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.7          |  |  |  |
| <b>Total Applied</b>                         | 201,500 gal   |  |  |  |
| <b>Loads per Field</b>                       | 31.0          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 153           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 233           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 330           |  |  |  |

**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.

**6/2017 - 5/2018 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<br>bu | 125 | 0                             | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 9,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 18.7          |  |  |  |
| <b>Total Applied</b>                         | 174,200 gal   |  |  |  |
| <b>Loads per Field</b>                       | 26.8          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 153           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 233           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 330           |  |  |  |

**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.

**6/2017 - 5/2018 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 |
|----------|------------------------|---|-------------------------------|------------------|
| Soybeans | 43.7999992370605<br>bu | 0 | 100                           | 55               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 6,700 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 94.8          |  |  |  |
| <b>Total Applied</b>                         | 635,050 gal   |  |  |  |
| <b>Loads per Field</b>                       | 97.7          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 111           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 168           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 238           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2017 - 5/2018 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<br>bu | 0 | 75                            | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 6,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.7          |  |  |  |
| <b>Total Applied</b>                         | 139,100 gal   |  |  |  |
| <b>Loads per Field</b>                       | 21.4          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 106           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 227           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2017 - 5/2018 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<br>bu | 0 | 40                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 5,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 168.3         |  |  |  |
| <b>Total Applied</b>                         | 908,700 gal   |  |  |  |
| <b>Loads per Field</b>                       | 139.8         |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 89            |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 135           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 192           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2017 - 5/2018 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<br>bu | 100 | 80                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Sep 2017      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 5.0           |  |  |  |
| <b>Total Applied</b>                         | 18,850 gal    |  |  |  |
| <b>Loads per Field</b>                       | 2.9           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

**6/2017 - 5/2018 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<br>bu | 130 | 75                            | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 6.2           |  |  |  |
| <b>Total Applied</b>                         | 23,400 gal    |  |  |  |
| <b>Loads per Field</b>                       | 3.6           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

**6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P1400**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 100 | 80                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 6.5           |  |  |  |
| <b>Total Applied</b>                         | 24,700 gal    |  |  |  |
| <b>Loads per Field</b>                       | 3.8           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

**6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 1.0 | 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.



6/2017 - 5/2018 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<br>bu | 130 | 80                            | 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.

6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000C

Field Information

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 3.9 | Spreadable Acres:    | 0.7        |
| 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 | 122.099998474121<br>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.

6/2017 - 5/2018 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<br>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.

**6/2017 - 5/2018 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<br>bu | 0 | 85                            | 35               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 7,900 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 99.0          |  |  |  |
| <b>Total Applied</b>                         | 781,950 gal   |  |  |  |
| <b>Loads per Field</b>                       | 120.3         |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 130           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 198           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 280           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4200**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 11.3 | Spreadable Acres:    | 2.4        |
| Non-Spreadable Acres: | 8.9  | 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<br>bu | 0 | 55                            | 30               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 7,600 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 2.5           |  |  |  |
| <b>Total Applied</b>                         | 18,850 gal    |  |  |  |
| <b>Loads per Field</b>                       | 2.9           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 125           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 190           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 270           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2017 - 5/2018 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4300**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 17.1 | Spreadable Acres:    | 7.2        |
| Non-Spreadable Acres: | 9.9  | 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<br>bu | 0 | 55                            | 45               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 7,600 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 7.3           |  |  |  |
| <b>Total Applied</b>                         | 55,250 gal    |  |  |  |
| <b>Loads per Field</b>                       | 8.5           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 125           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 190           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 270           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2017 - 5/2018 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 |
|----------|------------------------|---|-------------------------------|------------------|
| Soybeans | 43.7999992370605<br>bu | 0 | 100                           | 40               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2017      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 7,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 31.0          |  |  |  |
| <b>Total Applied</b>                         | 229,450 gal   |  |  |  |
| <b>Loads per Field</b>                       | 35.3          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 122           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 185           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 263           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

Summary Tables - 6/2017 - 5/2018

F. Manure Summary: 6/2017 - 5/2018

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 2,181,150 | 255,200  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 4,055,350 | 502,450  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 4,055,350 | 502,450  |  |  |
| End of Year Inventory       | 2,683,800 | 254,750  |  |  |

G. Land Applied Nutrient Summary: 6/2017 - 5/2018

|                          | 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                | 4,055,350 gals | 66,924           | 101,585                       | 144,053          |
| GDU                      | 502,450 gals   | 19,316           | 21,168                        | 13,230           |
| <b>Manure Total</b>      |                | 86,240           | 122,753                       | 157,283          |
|                          |                |                  |                               |                  |
|                          | 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>             |                | 86,240           | 122,753                       | 157,283          |

**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                                 |
|                |             | 1.0        | 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]                             |

<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: 6/2017 - 5/2018**

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

| Field ID          | Field SubID | Crop     | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|-------------------|-------------|----------|---------------|-------------------|--------------|-----------------|---------|
| 8000E             |             |          |               |                   |              |                 |         |
| MO602430P<br>4200 |             | Soybeans |               |                   |              |                 |         |
| MO602430P<br>4300 |             | Soybeans |               |                   |              |                 |         |
| MO602430P<br>4400 |             | Soybeans |               |                   |              |                 |         |

## **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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 6/3/2015 5:00:06 PM  
Exported: 6/3/2015 5:03:14 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

#### **Operation:**

Name: Trenton Farms RE, LLC

#### **Operation Contact:**

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

# 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:

6/2018 - 5/2019

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:** June 2015 - May 2020

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**A. Manure Transfers - 6/2018 - 5/2019**

**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 - 6/2018 - 5/2019**

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Sep 2018       | MO602419P<br>4000  |             | Soybeans        | GDU       | Injector Tank         | 102.3         | 2,300            | Gal            | 235,300       |
| Oct 2018       | MO602419P<br>1300  |             | Soybeans        | GDU       | Injector Tank         | 12.4          | 2,300            | Gal            | 28,600        |
| Oct 2018       | MO602420P<br>3400  |             | Soybeans        | Gestation | Injector Tank         | 29.4          | 6,200            | Gal            | 182,000       |
| Oct 2018       | MO602420P<br>4000  |             | Corn grain      | Gestation | Injector Tank         | 104.6         | 8,200            | Gal            | 858,000       |
| Oct 2018       | MO602421P<br>3500B |             | Soybeans        | Gestation | Injector Tank         | 21.7          | 6,200            | Gal            | 134,550       |
| Oct 2018       | MO602421P<br>3500C |             | Soybeans        | Gestation | Injector Tank         | 18.7          | 5,900            | Gal            | 110,500       |
| Oct 2018       | MO602429P<br>8000B |             | Corn grain      | Gestation | Injector Tank         | 94.8          | 8,100            | Gal            | 767,650       |
| Oct 2018       | MO602429P<br>8000C |             | Corn grain      | Gestation | Injector Tank         | 21.7          | 8,100            | Gal            | 176,150       |
| Oct 2018       | MO602429P<br>8000D |             | Corn grain      | Gestation | Injector Tank         | 168.2         | 8,300            | Gal            | 1,396,200     |
| Oct 2018       | MO602429P<br>8000E |             | Corn grain      | Gestation | Injector Tank         | 98.9          | 7,800            | Gal            | 771,550       |
| Oct 2018       | MO602430P<br>4200  |             | Corn grain      | GDU       | Injector Tank         | 2.5           | 3,400            | Gal            | 8,450         |
| Oct 2018       | MO602430P<br>4300  |             | Corn grain      | GDU       | Injector Tank         | 7.3           | 3,400            | Gal            | 24,700        |
| Oct 2018       | MO602430P<br>4400  |             | Corn grain      | GDU       | Injector Tank         | 31.2          | 3,400            | Gal            | 105,950       |
| Nov 2018       | MO602430P<br>1150B |             | Soybeans        | GDU       | Injector Tank         | 5.1           | 2,300            | Gal            | 11,700        |
| Nov 2018       | MO602430P<br>1150C |             | Soybeans        | GDU       | Injector Tank         | 6.1           | 3,000            | Gal            | 18,200        |

| <b>Month and Year</b> | <b>Field ID</b>   | <b>Field SubID</b> | <b>Planned Crop(s)</b> | <b>Source</b> | <b>Application Equipment</b> | <b>Acres Covered</b> | <b>Application Rate</b> | <b>Units per acre</b> | <b>Total Applied</b> |
|-----------------------|-------------------|--------------------|------------------------|---------------|------------------------------|----------------------|-------------------------|-----------------------|----------------------|
| Nov 2018              | MO602430P<br>1400 |                    | Soybeans               | GDU           | Injector Tank                | 14.0                 | 2,500                   | Gal                   | 35,100               |



**Manure Application Records - 6/2018 - 5/2019**

| 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 - 6/2018 - 5/2019 (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 - 6/2018 - 5/2019**

| 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 - 6/2018 - 5/2019 (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.

**Manure Application Records - 6/2018 - 5/2019**

| 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 - 6/2018 - 5/2019 (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 |
|-------|-------------------|-----------------------------|---------------------------|----------------------------------|----------|------------|----------------|--------------------------|-------------------------|----------------------|
| 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 - 6/2018 - 5/2019**

No planned commercial fertilizer applications for the period.

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#### 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.

**6/2018 - 5/2019 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<br>bu | 0 | 60                            | 105              |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 12.4          |  |  |  |
| <b>Total Applied</b>                         | 28,600 gal    |  |  |  |
| <b>Loads per Field</b>                       | 4.4           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 89            |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 97            |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 61            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602419P4000**

**Field Information**

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>bu | 0 | 60                            | 105              |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Sep 2018      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 102.3         |  |  |  |
| <b>Total Applied</b>                         | 235,300 gal   |  |  |  |
| <b>Loads per Field</b>                       | 36.2          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 89            |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 97            |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 61            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2018 - 5/2019 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<br>bu | 0 | 50                            | 40               |

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                         | 6,200 gal/a   |  |  |  |
| Acres Covered                            | 29.4          |  |  |  |
| Total Applied                            | 182,000 gal   |  |  |  |
| Loads per Field                          | 28.0          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 102           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 155           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 220           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**6/2018 - 5/2019 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<br>bu | 130 | 85                            | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 8,200 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 104.6         |  |  |  |
| <b>Total Applied</b>                         | 858,000 gal   |  |  |  |
| <b>Loads per Field</b>                       | 132.0         |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 135           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 205           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 291           |  |  |  |

**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.

**6/2018 - 5/2019 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<br>bu | 0 | 60                            | 40               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 6,200 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.7          |  |  |  |
| <b>Total Applied</b>                         | 134,550 gal   |  |  |  |
| <b>Loads per Field</b>                       | 20.7          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 102           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 155           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 220           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2018 - 5/2019 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<br>bu | 0 | 0                             | 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                         | 5,900 gal/a   |  |  |  |
| Acres Covered                            | 18.7          |  |  |  |
| Total Applied                            | 110,500 gal   |  |  |  |
| Loads per Field                          | 17.0          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 97            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 148           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 209           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

6/2018 - 5/2019 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 |
|------------|------------------------|-----|-------------------------------|------------------|
| Corn grain | 122.099998474121<br>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 2018      |  |  |  |
| Manure Source                            | Gestation     |  |  |  |
| Application Rate                         | 8,100 gal/a   |  |  |  |
| Acres Covered                            | 94.8          |  |  |  |
| Total Applied                            | 767,650 gal   |  |  |  |
| Loads per Field                          | 118.1         |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 134           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 203           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 288           |  |  |  |

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.

**6/2018 - 5/2019 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<br>bu | 130 | 95                            | 15               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 8,100 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.7          |  |  |  |
| <b>Total Applied</b>                         | 176,150 gal   |  |  |  |
| <b>Loads per Field</b>                       | 27.1          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 134           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 203           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 288           |  |  |  |

**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.

**6/2018 - 5/2019 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<br>bu | 130 | 55                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | Gestation     |  |  |  |
| <b>Application Rate</b>                      | 8,300 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 168.2         |  |  |  |
| <b>Total Applied</b>                         | 1,396,200 gal |  |  |  |
| <b>Loads per Field</b>                       | 214.8         |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 137           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 208           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 295           |  |  |  |

**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.

6/2018 - 5/2019 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<br>bu | 0 | 60                            | 0                |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Nov 2018      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 2,300 gal/a   |  |  |  |
| Acres Covered                            | 5.1           |  |  |  |
| Total Applied                            | 11,700 gal    |  |  |  |
| Loads per Field                          | 1.8           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 89            |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 97            |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 61            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

6/2018 - 5/2019 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<br>bu | 0 | 55                            | 40               |

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

Manure Management

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| Application Time                         | Nov 2018      |  |  |  |
| Manure Source                            | GDU           |  |  |  |
| Application Rate                         | 3,000 gal/a   |  |  |  |
| Acres Covered                            | 6.1           |  |  |  |
| Total Applied                            | 18,200 gal    |  |  |  |
| Loads per Field                          | 2.8           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 116           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 126           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 79            |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P1400**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 0 | 60                            | 0                |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Nov 2018      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 2,500 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 14.0          |  |  |  |
| <b>Total Applied</b>                         | 35,100 gal    |  |  |  |
| <b>Loads per Field</b>                       | 5.4           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 96            |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 105           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 66            |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 1.0 | 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.



6/2018 - 5/2019 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<br>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.

6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000C

Field Information

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 3.9 | Spreadable Acres:    | 0.7        |
| 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 | 43.7999992370605<br>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.

6/2018 - 5/2019 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<br>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.

6/2018 - 5/2019 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<br>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                         | 7,800 gal/a   |  |  |  |
| Acres Covered                            | 98.9          |  |  |  |
| Total Applied                            | 771,550 gal   |  |  |  |
| Loads per Field                          | 118.7         |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 129           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 195           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 277           |  |  |  |

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.

**6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4200**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 11.3 | Spreadable Acres:    | 2.4        |
| Non-Spreadable Acres: | 8.9  | 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<br>bu | 140 | 75                            | 20               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 2.5           |  |  |  |
| <b>Total Applied</b>                         | 8,450 gal     |  |  |  |
| <b>Loads per Field</b>                       | 1.3           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 131           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 143           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 90            |  |  |  |

**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.

**6/2018 - 5/2019 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4300**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 17.1 | Spreadable Acres:    | 7.2        |
| Non-Spreadable Acres: | 9.9  | 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<br>bu | 140 | 70                            | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 7.3           |  |  |  |
| <b>Total Applied</b>                         | 24,700 gal    |  |  |  |
| <b>Loads per Field</b>                       | 3.8           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 131           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 143           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 90            |  |  |  |

**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.

**6/2018 - 5/2019 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 |
|------------|------------------------|-----|-------------------------------|------------------|
| Corn grain | 122.099998474121<br>bu | 125 | 115                           | 25               |

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

**Manure Management**

|  | Application 1 |  |  |  |
|--|---------------|--|--|--|
| <b>Application Time</b>                      | Oct 2018      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 31.2          |  |  |  |
| <b>Total Applied</b>                         | 105,950 gal   |  |  |  |
| <b>Loads per Field</b>                       | 16.3          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 131           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 143           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 90            |  |  |  |

**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.

Summary Tables - 6/2018 - 5/2019

F. Manure Summary: 6/2018 - 5/2019

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 2,683,800 | 254,750  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 4,396,600 | 468,000  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 4,396,600 | 468,000  |  |  |
| End of Year Inventory       | 2,845,200 | 288,750  |  |  |

G. Land Applied Nutrient Summary: 6/2018 - 5/2019

|                          | 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                | 4,396,600 gals | 72,559           | 110,053                       | 156,155          |
| GDU                      | 468,000 gals   | 18,086           | 19,724                        | 12,403           |
| <b>Manure Total</b>      |                | 90,645           | 129,777                       | 168,558          |
|                          |                |                  |                               |                  |
|                          | 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>             |                | 90,645           | 129,777                       | 168,558          |

## 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                                 |
|                |             | 1.0        | 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]                             |

<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: 6/2018 - 5/2019**

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

| Field ID          | Field SubID | Crop       | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|-------------------|-------------|------------|---------------|-------------------|--------------|-----------------|---------|
| 8000E             |             |            |               |                   |              |                 |         |
| MO602430P<br>4200 |             | Corn grain |               |                   |              |                 |         |
| MO602430P<br>4300 |             | Corn grain |               |                   |              |                 |         |
| MO602430P<br>4400 |             | Corn grain |               |                   |              |                 |         |

**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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 6/3/2015 5:00:06 PM  
Exported: 6/3/2015 5:03:14 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

**Operation:**

Name: Trenton Farms RE, LLC

**Operation Contact:**

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)

# 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:

6/2019 - 5/2020

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  
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Trenton, MO 64683  
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**Whole Plan Period:** June 2015 - May 2020

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**A. Manure Transfers - 6/2019 - 5/2020**

**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 - 6/2019 - 5/2020**

| Month and Year | Field ID           | Field SubID | Planned Crop(s) | Source    | Application Equipment | Acres Covered | Application Rate | Units per acre | Total Applied |
|----------------|--------------------|-------------|-----------------|-----------|-----------------------|---------------|------------------|----------------|---------------|
| Sep 2019       | MO602419P<br>1300  |             | Corn grain      | GDU       | Injector Tank         | 12.3          | 3,800            | Gal            | 46,800        |
| Oct 2019       | MO602419P<br>3000B |             | Corn grain      | GDU       | Injector Tank         | 14.6          | 4,000            | Gal            | 58,500        |
| Oct 2019       | MO602419P<br>4000  |             | Corn grain      | GDU       | Injector Tank         | 102.3         | 3,800            | Gal            | 388,700       |
| Oct 2019       | MO602420P<br>3400  |             | Corn grain      | Gestation | Injector Tank         | 29.4          | 8,100            | Gal            | 237,900       |
| Oct 2019       | MO602420P<br>4000  |             | Soybeans        | Gestation | Injector Tank         | 104.6         | 6,400            | Gal            | 669,500       |
| Oct 2019       | MO602421P<br>3500B |             | Corn grain      | Gestation | Injector Tank         | 21.7          | 8,100            | Gal            | 175,500       |
| Oct 2019       | MO602421P<br>3500C |             | Corn grain      | Gestation | Injector Tank         | 18.7          | 8,200            | Gal            | 153,400       |
| Oct 2019       | MO602429P<br>8000B |             | Soybeans        | Gestation | Injector Tank         | 94.8          | 6,700            | Gal            | 635,050       |
| Oct 2019       | MO602429P<br>8000C |             | Soybeans        | Gestation | Injector Tank         | 21.7          | 6,400            | Gal            | 139,100       |
| Oct 2019       | MO602429P<br>8000D |             | Soybeans        | Gestation | Injector Tank         | 168.3         | 6,400            | Gal            | 1,077,050     |
| Oct 2019       | MO602429P<br>8000E |             | Soybeans        | Gestation | Injector Tank         | 98.9          | 6,500            | Gal            | 642,850       |
| Oct 2019       | MO602430P<br>1150B |             | Corn grain      | GDU       | Injector Tank         | 5.0           | 3,800            | Gal            | 18,850        |
| Oct 2019       | MO602430P<br>1150C |             | Corn grain      | GDU       | Injector Tank         | 6.1           | 3,700            | Gal            | 22,750        |
| Oct 2019       | MO602430P<br>4200  |             | Soybeans        | Gestation | Injector Tank         | 2.4           | 7,700            | Gal            | 18,850        |
| Oct 2019       | MO602430P<br>4300  |             | Soybeans        | Gestation | Injector Tank         | 7.3           | 7,700            | Gal            | 55,900        |

| <b>Month and Year</b> | <b>Field ID</b>   | <b>Field SubID</b> | <b>Planned Crop(s)</b> | <b>Source</b> | <b>Application Equipment</b> | <b>Acres Covered</b> | <b>Application Rate</b> | <b>Units per acre</b> | <b>Total Applied</b> |
|-----------------------|-------------------|--------------------|------------------------|---------------|------------------------------|----------------------|-------------------------|-----------------------|----------------------|
| Oct 2019              | MO602430P<br>4400 |                    | Soybeans               | Gestation     | Injector Tank                | 31.1                 | 6,800                   | Gal                   | 211,250              |



**Manure Application Records - 6/2019 - 5/2020**

| 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 - 6/2019 - 5/2020 (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 - 6/2019 - 5/2020**

| 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 - 6/2019 - 5/2020 (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 - 6/2019 - 5/2020**

| 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 - 6/2019 - 5/2020 (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 - 6/2019 - 5/2020**

No planned commercial fertilizer applications for the period.

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#### 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.

6/2019 - 5/2020 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<br>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>                      | Sep 2019      |  |  |  |
| <b>Manure Source</b>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 12.3          |  |  |  |
| <b>Total Applied</b>                         | 46,800 gal    |  |  |  |
| <b>Loads per Field</b>                       | 7.2           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P4000

**Field Information**

|                       |       |                      |            |
|-----------------------|-------|----------------------|------------|
| Total Acres:          | 112.2 | Spreadable Acres:    | 102.2      |
| Non-Spreadable Acres: | 10.0  | 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<br>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>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 102.3         |  |  |  |
| <b>Total Applied</b>                         | 388,700 gal   |  |  |  |
| <b>Loads per Field</b>                       | 59.8          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

**6/2019 - 5/2020 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<br>bu | 130 | 70                            | 20               |

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>                      | 8,100 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 29.4          |  |  |  |
| <b>Total Applied</b>                         | 237,900 gal   |  |  |  |
| <b>Loads per Field</b>                       | 36.6          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 134           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 203           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 288           |  |  |  |

**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.

**6/2019 - 5/2020 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<br>bu | 0 | 70                            | 45               |

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>                      | 6,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 104.6         |  |  |  |
| <b>Total Applied</b>                         | 669,500 gal   |  |  |  |
| <b>Loads per Field</b>                       | 103.0         |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 106           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 227           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2019 - 5/2020 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<br>bu | 130 | 80                            | 25               |

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>                      | 8,100 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.7          |  |  |  |
| <b>Total Applied</b>                         | 175,500 gal   |  |  |  |
| <b>Loads per Field</b>                       | 27.0          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 134           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 203           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 288           |  |  |  |

**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.

6/2019 - 5/2020 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<br>bu | 125 | 0                             | 0                |

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>                      | 8,200 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 18.7          |  |  |  |
| <b>Total Applied</b>                         | 153,400 gal   |  |  |  |
| <b>Loads per Field</b>                       | 23.6          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 135           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 205           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 291           |  |  |  |

**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.

6/2019 - 5/2020 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 |
|----------|------------------------|---|-------------------------------|------------------|
| Soybeans | 43.7999992370605<br>bu | 0 | 100                           | 55               |

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                         | 6,700 gal/a   |  |  |  |
| Acres Covered                            | 94.8          |  |  |  |
| Total Applied                            | 635,050 gal   |  |  |  |
| Loads per Field                          | 97.7          |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 111           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 168           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 238           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

6/2019 - 5/2020 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<br>bu | 0 | 75                            | 25               |

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>                      | 6,400 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 21.7          |  |  |  |
| <b>Total Applied</b>                         | 139,100 gal   |  |  |  |
| <b>Loads per Field</b>                       | 21.4          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 106           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 227           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

6/2019 - 5/2020 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<br>bu | 0 | 40                            | 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                            | Gestation     |  |  |  |
| Application Rate                         | 6,400 gal/a   |  |  |  |
| Acres Covered                            | 168.3         |  |  |  |
| Total Applied                            | 1,077,050 gal |  |  |  |
| Loads per Field                          | 165.7         |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 106           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 160           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 227           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**6/2019 - 5/2020 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<br>bu | 100 | 80                            | 0                |

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>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 5.0           |  |  |  |
| <b>Total Applied</b>                         | 18,850 gal    |  |  |  |
| <b>Loads per Field</b>                       | 2.9           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 146           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 160           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 100           |  |  |  |

**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.

**6/2019 - 5/2020 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<br>bu | 130 | 75                            | 25               |

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>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 3,700 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 6.1           |  |  |  |
| <b>Total Applied</b>                         | 22,750 gal    |  |  |  |
| <b>Loads per Field</b>                       | 3.5           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 142           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 155           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 98            |  |  |  |

**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.

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P1400

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 21.0 | Spreadable Acres:    | 13.9       |
| Non-Spreadable Acres: | 7.1  | 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<br>bu | 100 | 80                            | 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

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

**6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID:**

**Field Information**

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 1.0 | 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.



**6/2019 - 5/2020 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<br>bu | 130 | 80                            | 25               |

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>                         | GDU           |  |  |  |
| <b>Application Rate</b>                      | 4,000 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 14.6          |  |  |  |
| <b>Total Applied</b>                         | 58,500 gal    |  |  |  |
| <b>Loads per Field</b>                       | 9.0           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 154           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 168           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 106           |  |  |  |

**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.

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602419P3000C

**Field Information**

|                       |     |                      |            |
|-----------------------|-----|----------------------|------------|
| Total Acres:          | 3.9 | Spreadable Acres:    | 0.7        |
| 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 | 122.099998474121<br>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.

6/2019 - 5/2020 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<br>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.

**6/2019 - 5/2020 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<br>bu | 0 | 85                            | 35               |

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>                      | 6,500 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 98.9          |  |  |  |
| <b>Total Applied</b>                         | 642,850 gal   |  |  |  |
| <b>Loads per Field</b>                       | 98.9          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 107           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 163           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 231           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

**6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN**

**FIELD ID: MO602430P4200**

**Field Information**

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 11.3 | Spreadable Acres:    | 2.4        |
| Non-Spreadable Acres: | 8.9  | 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<br>bu | 0 | 55                            | 30               |

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>                      | 7,700 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 2.4           |  |  |  |
| <b>Total Applied</b>                         | 18,850 gal    |  |  |  |
| <b>Loads per Field</b>                       | 2.9           |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 127           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 193           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 273           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

6/2019 - 5/2020 NUTRIENT MANAGEMENT PLAN

FIELD ID: MO602430P4300

Field Information

|                       |      |                      |            |
|-----------------------|------|----------------------|------------|
| Total Acres:          | 17.1 | Spreadable Acres:    | 7.2        |
| Non-Spreadable Acres: | 9.9  | 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<br>bu | 0 | 55                            | 45               |

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                         | 7,700 gal/a   |  |  |  |
| Acres Covered                            | 7.3           |  |  |  |
| Total Applied                            | 55,900 gal    |  |  |  |
| Loads per Field                          | 8.6           |  |  |  |
| Placement                                | Injected      |  |  |  |
| N (lbs/acres)                            | 127           |  |  |  |
| P <sub>2</sub> O <sub>5</sub> (lbs/acre) | 193           |  |  |  |
| K <sub>2</sub> O (lbs/acre)              | 273           |  |  |  |

Commercial Fertilizer Management

No planned commercial fertilizer application. No records in database.

**6/2019 - 5/2020 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 |
|----------|------------------------|---|-------------------------------|------------------|
| Soybeans | 43.7999992370605<br>bu | 0 | 100                           | 40               |

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>                      | 6,800 gal/a   |  |  |  |
| <b>Acres Covered</b>                         | 31.1          |  |  |  |
| <b>Total Applied</b>                         | 211,250 gal   |  |  |  |
| <b>Loads per Field</b>                       | 32.5          |  |  |  |
| <b>Placement</b>                             | Injected      |  |  |  |
| <b>N (lbs/acres)</b>                         | 112           |  |  |  |
| <b>P<sub>2</sub>O<sub>5</sub> (lbs/acre)</b> | 170           |  |  |  |
| <b>K<sub>2</sub>O (lbs/acre)</b>             | 241           |  |  |  |

**Commercial Fertilizer Management**

No planned commercial fertilizer application. No records in database.

Summary Tables - 6/2019 - 5/2020

F. Manure Summary: 6/2019 - 5/2020

|                             | Source 1  | Source 2 |  |  |
|-----------------------------|-----------|----------|--|--|
| Source                      | Gestation | GDU      |  |  |
| Units                       | gals      | gals     |  |  |
| Beginning of Year Inventory | 2,845,200 | 288,750  |  |  |
| <b>Inputs</b>               |           |          |  |  |
| Production                  | 4,558,000 | 502,000  |  |  |
| Imports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Inputs                | 4,558,000 | 502,000  |  |  |
| <b>Outputs</b>              |           |          |  |  |
| Land Applied                | 4,016,350 | 535,600  |  |  |
| Exports - off farm          | 0         | 0        |  |  |
| Transfers - on farm         | 0         | 0        |  |  |
| Total Outputs               | 4,016,350 | 535,600  |  |  |
| End of Year Inventory       | 3,386,850 | 255,150  |  |  |

G. Land Applied Nutrient Summary: 6/2019 - 5/2020

|                          | 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                | 4,016,350 gals | 66,421           | 100,549                       | 142,584          |
| GDU                      | 535,600 gals   | 20,576           | 22,534                        | 14,106           |
| <b>Manure Total</b>      |                | 86,997           | 123,083                       | 156,690          |
|                          |                |                  |                               |                  |
|                          | 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>             |                | 86,997           | 123,083                       | 156,690          |

## 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                                 |
|                |             | 1.0        | 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]                             |

<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: 6/2019 - 5/2020

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

| Field ID          | Field SubID | Crop     | Planting Date | Hybrid or Variety | Seeding Rate | Harvest date(s) | Yield/A |
|-------------------|-------------|----------|---------------|-------------------|--------------|-----------------|---------|
| 8000E             |             |          |               |                   |              |                 |         |
| MO602430P<br>4200 |             | Soybeans |               |                   |              |                 |         |
| MO602430P<br>4300 |             | Soybeans |               |                   |              |                 |         |
| MO602430P<br>4400 |             | Soybeans |               |                   |              |                 |         |

**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\Original MMP 2015.mmp  
Initialized: 11/6/2008  
Last Saved: 6/3/2015 5:00:06 PM  
Exported: 6/3/2015 5:03:14 PM  
Title:  
Years in Plan: 5  
Plan Start Year: 2015  
Plan Start Month: 6

**Operation:**

Name: Trenton Farms RE, LLC

**Operation Contact:**

Trenton Farms RE, LLC  
SW State Highway W  
Trenton MO 64683  
507-825-7032 (office)  
(home)



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.)



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



-  (0.7ac.) Field Boundary
-  1000 ft Residence Buffer
-  100 ft Water Buffer
-  50 ft Property Line/Road Buffer

MO602419P3000D; 15 (3.70 ac.)



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
-  1000 ft Residence Buffer

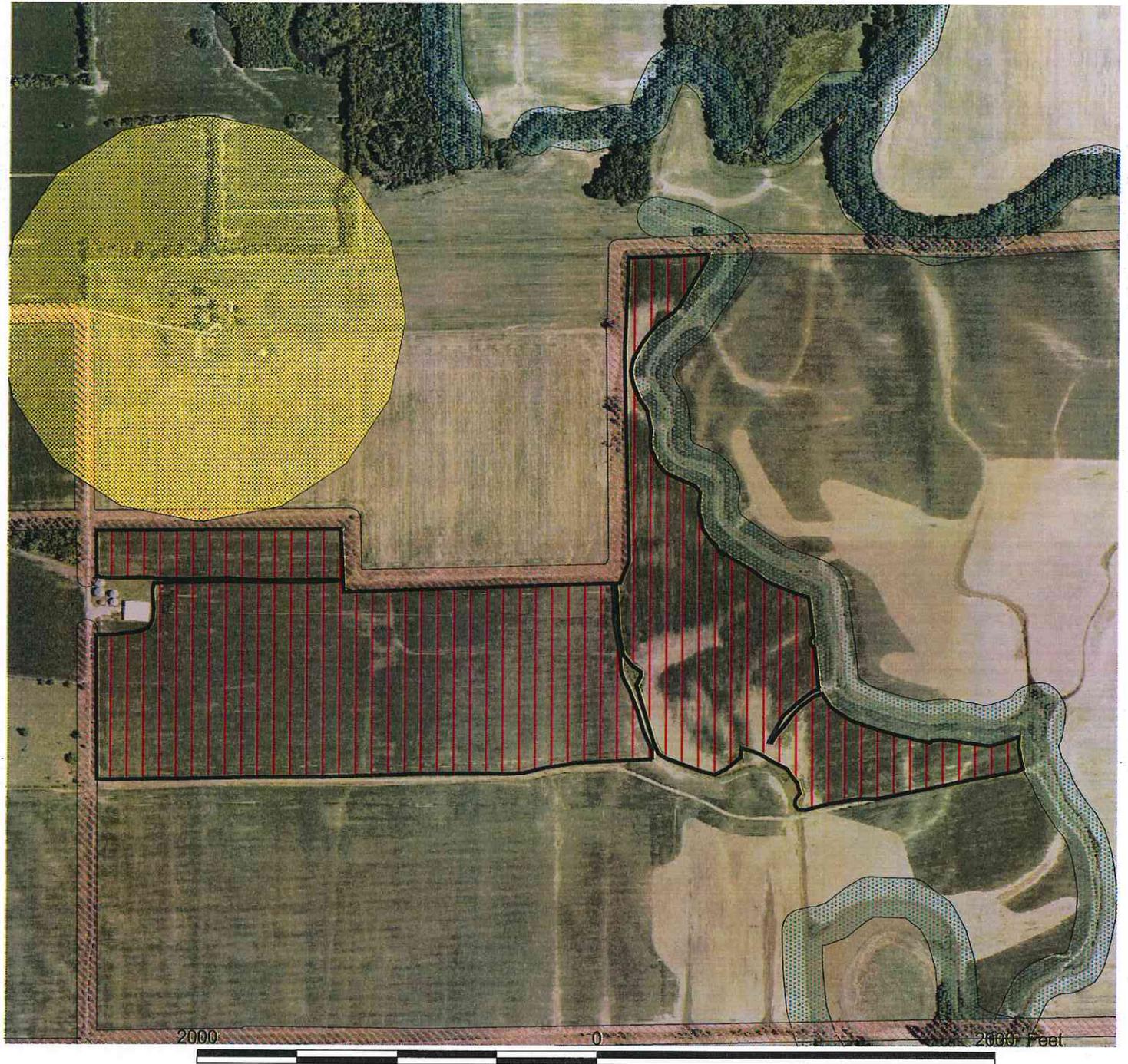
MO602429P8000D; 15 (186.07 ac.)



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

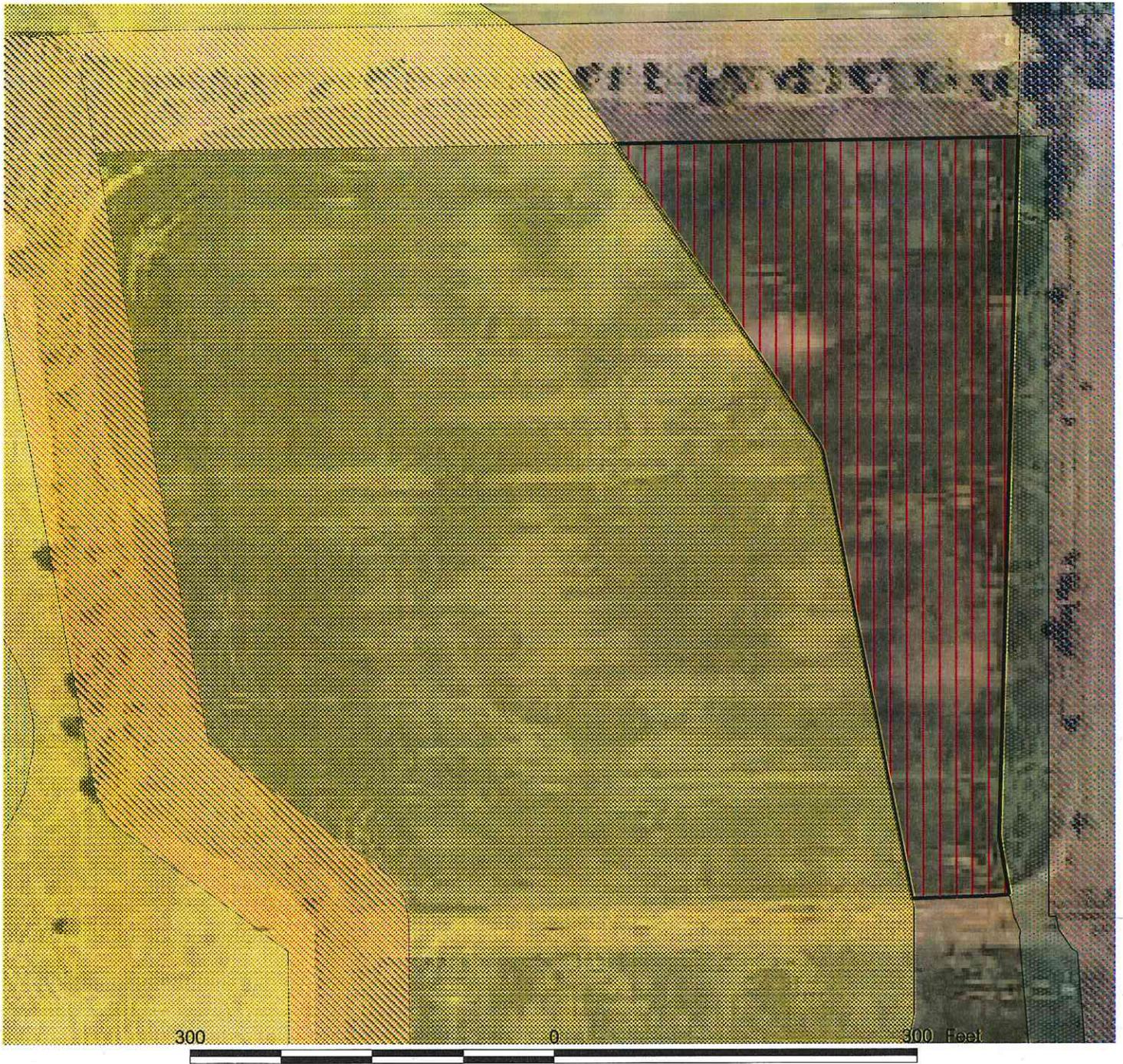


Date: Jun 3, 2015  
Field Name: MO602429P8000E; 15  
Location: Grundy Co., Missouri, U.S.  
Farm Name: Trenton Farms RE LLC  
Client Name: P-Index  
Total Acres: 111.42  
Field Boundary Start Location:  
Latitude: 39.98346514  
Longitude: -93.63180642



-  (98.9ac.) Field Boundary
-  1000 ft Residence Buffer
-  50 ft Property Line and Road Buffer
-  100 ft Water Buffer
-  100 ft Water Buffer

MO602430P4200; 15 (11.30 ac.)



Date: Jun 3, 2015  
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



-  1000 ft Residence Buffer
-  (2.4ac.) Field Boundary
-  50 ft Property Line and Road Buffer
-  100 ft Water Buffer

MO602430P4300; 15 (17.01 ac.)



Date: Jun 3, 2015  
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



-  (7.2ac.) Field Boundary
-  1000 ft Residence Buffer
-  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



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