

## Conservation Plan

Westridge Dairy  
2114 Ames Rd.  
Red Bud, Il 62278

FSA Farm #3699
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### Field #8

**Conservation Crop Rotation** – Corn Silage/ Soybeans -- is the planned rotation.

**Tillage Practice** – In preparation for the corn crop, the field will be worked with a field cultivator once. The corn will be planted in 30 inch rows, following corn silage removal, in the fall, the field will lay idle until the following spring. The surface residue prediction following silage removal is 21%. The following spring the field will be planted to soybeans. The soybeans will be planted in 15 inch rows using a no-till planter. After the harvest of the soybeans the field will have manure applied to it using a slurry box spreader. Following manure application the manure will be incorporated with a finish disk. The field will then lay idle until the next spring. The surface residue prediction following the soybean harvest is 70%. In years of no manure application, anhydrous ammonia will be applied.

**Manure Applications** – will be planned for this field in accordance with the Waste Utilization Plan – applications will occur via slurry box spreader, and then incorporated into soil.

**Manure Application Limitations** – There is a residence within ¼ mile of this application field which under LMFA regulations requires soil incorporation within 24 hours of application. Also there is a stream near the field which requires a 200 foot setback in these areas. Additionally this field sits within a 10 year flood plain so that livestock waste may not be applied unless the injection or incorporation method of application is used..

### Soil Loss Calculation

Net C Factor RUSLE 2 – 0.25

Soil Conditioning Index – 0.03

STIR Value – 28.04

Soil Type 8787A Calculated T Loss – 3.1

Acceptable T Loss – 5.00

Targeted crop nutrient needs will be achieved by means of manure applications in years designated in the Waste Utilization Plan and by means of commercial fertilizer in years of no manure applications. Refer to Nutrient Budget located behind each years Waste Application Tab.



## RUSLE2 Profile Erosion Calculation Record

Info: Field #8

**File:** Plan: Profile (Temp. scenario[1]) of Westridge Dairy\*

**Access Group:** R2\_NRCS\_Fld\_Office

**Inputs:**

Location: Illinois\Monroe County

Soil: 8787A Banlic silt loam, 0 to 2 percent slopes, occasionally flooded\Banlic silt loam 85%

Slope length (horiz): 150 ft

Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\Westridge cs-sb	Corn, silage	tons	25.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-sb	Soybean, mw 15 - 20 in rows	bu	39.000

Contouring: default

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

General yield level: Set by user

Rock cover: 0 %

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss erod. portion: 3.1 t/ac/yr

Detachment on slope: 3.1 t/ac/yr

Soil loss for cons. plan: 3.1 t/ac/yr

Sediment delivery: 3.1 t/ac/yr

Net C factor: 0.25

Net K factor: 0.42

Crit. slope length: --

Surf. cover after planting: --

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/5/0	Cultivator, field w/ spike points		11
4/6/0	Planter, double disk opnr w/fluted coulter	Corn, silage	11
9/28/0	Harvest, silage		21
5/15/1	Planter, double disk opnr w/fluted coulter	Soybean, mw 15 - 20 in rows	17
10/1/1	Harvest, killing crop 50pct standing stubble		70
10/2/1	Manure spreader, solid and semi-solid		79
10/3/1	Disk, tandem light finishing		39

Soil conditioning index (SCI): 0.03

STIR value: 28.04

Wind & irrigation-induced erosion for SCI: 0 t/ac/yr

The SCI is the Soil Conditioning Index rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The STIR value is the Soil Tillage Intensity Rating. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

# Application Field Detail Sheet

## Westridge Dairy

Field # 8  
Field Name Nicholson 12  
Land Owner Ralph & Janet Henry  
FSA Farm # 3699  
FSA Tract # 2159  
Tillable Acres 11.55  
Application Acres 8.64  
County Monroe  
Township Precinct 9  
Section 36

### Proximity Location

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Residence     | <input type="checkbox"/> Ponds                        |
| <input type="checkbox"/> Non-Farm Business        | <input type="checkbox"/> Rivers                       |
| <input type="checkbox"/> Common Place of Assembly | <input type="checkbox"/> Other Water Sources          |
| <input checked="" type="checkbox"/> Streams       | <input checked="" type="checkbox"/> 10 yr Flood Plain |
| <input type="checkbox"/> Wells                    | <input type="checkbox"/> Waterways                    |
| <input type="checkbox"/> Lake                     | <input type="checkbox"/> Drainage Ditches             |

### Provisions

- |   |                               |
|---|-------------------------------|
| <input checked="" type="checkbox"/> A - Residence within 1/4 mile - incorporation required                      | <i>LMFA Section 900.803.o</i> |
| <input checked="" type="checkbox"/> B - Application site within 200' of surface water or 150' of a potable well | <i>LMFA Section 900.803.p</i> |
| <input checked="" type="checkbox"/> C - Located in a 10 year Flood Plain  | <i>LMFA Section 900.803.q</i> |
| <input type="checkbox"/> D - Livestock waste may not be applied in waterways or drainage ditches in the field   | <i>LMFA Section 900.803.r</i> |
| <input type="checkbox"/> E - Frozen or snow covered ground may not be applied to with a Slope Over 5%           | <i>LMFA Section 900.803.s</i> |
| <input checked="" type="checkbox"/> F - No application during rainfall or to saturated soils                    | <i>LMFA Section 900.803.u</i> |

### Planting Intentions

Crop Year	Acres	Crop	Crop 2
2008	11.55	Soybeans	
2009	11.55	Corn Silage	
2010	11.55	Soybeans	
2011	11.55	Corn Silage	

# EFFINGHAM EQUITY

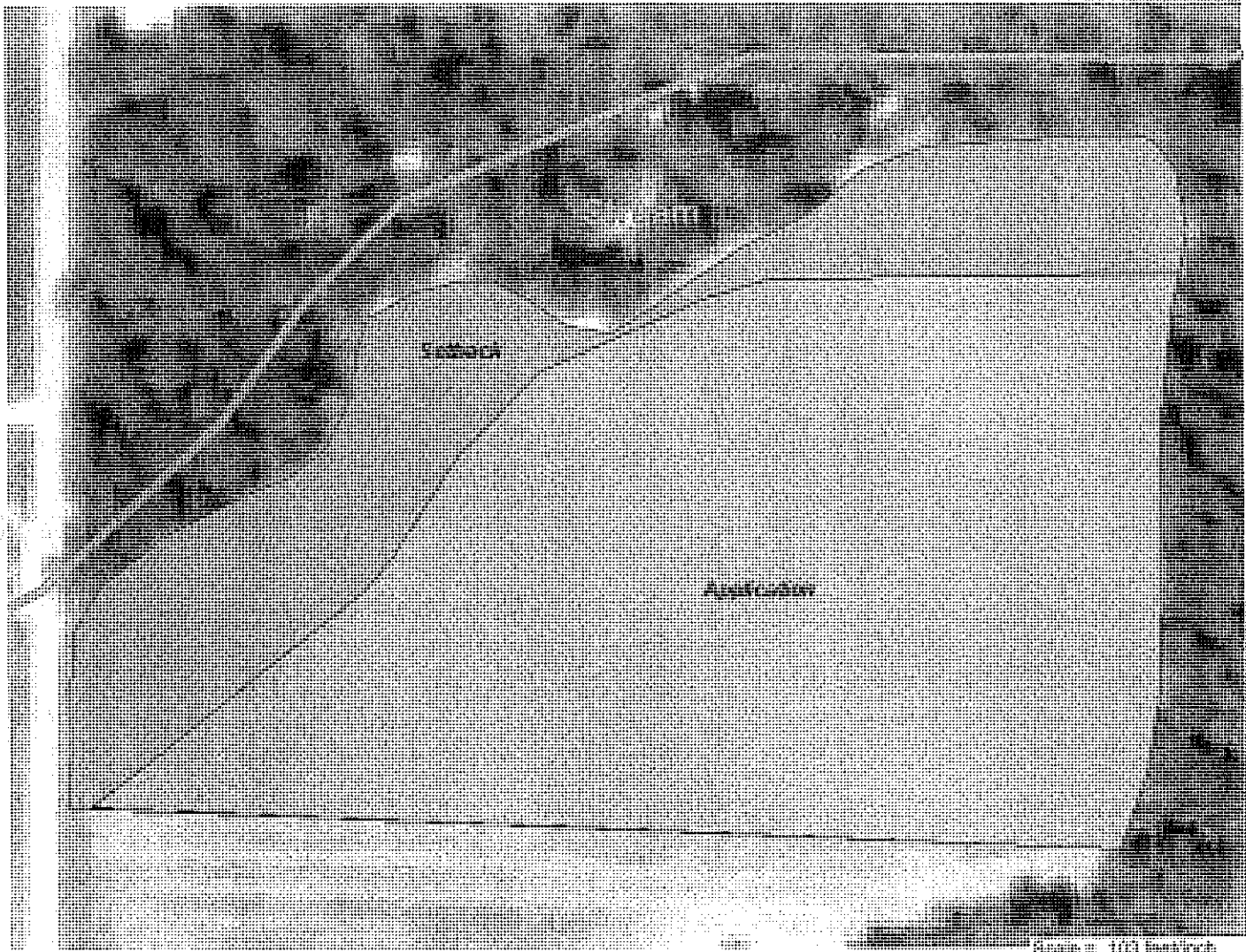
## Application Restrictions



Prepared For: Westridge Dairy  
 Farm:  
 Field: 08  
 Crop Zone:  
 Crop Year:

County: Monroe, IL  
 Twp Rng Sec: Precinct 9 36  
 Directions: Nicholson 12

Acres: 11.55



### Layer Summary

Layer: Setbacks  
 Attribute: Application Restrictions  
 Acres: 11.56  
 Average:  
 Weighted Average:  
 Minimum:  
 Maximum:

### Application Restrictions

-  Setback
-  Application

Acres

2.92

8.64

# EFFINGHAM EQUITY

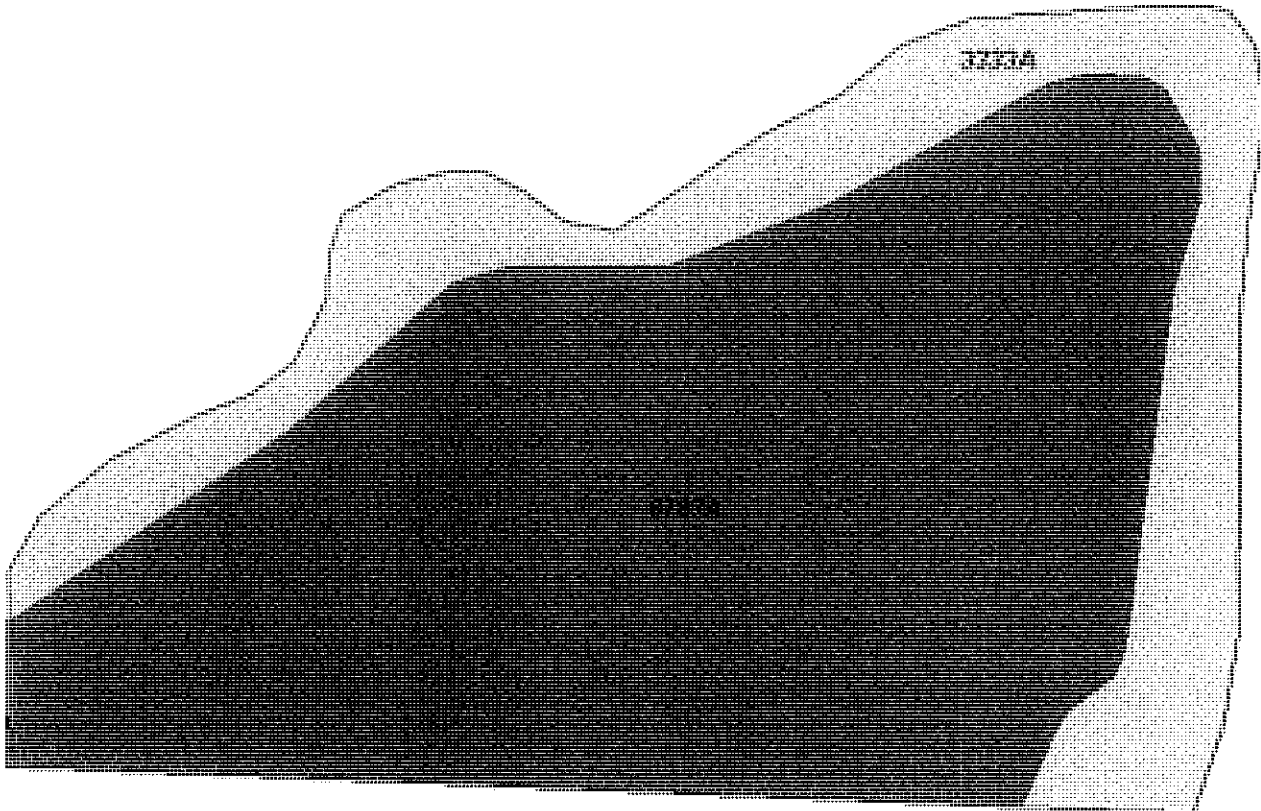
## MUSYM



Prepared For: Westridge Dairy  
 Farm:  
 Field: 08  
 Crop Zone:  
 Crop Year:

County: Monroe, IL  
 Twp Rng Sec: Precinct 9 36  
 Directions: Nicholson 12

Acres: 11.55



Scale = 103 feet/inch

Layer Summary		MUSYM	Acres
Layer:	Soil Type		
Attribute:	MUSYM		
Acres:	11.55		
Average:			
Weighted Average:			
Minimum:			
Maximum:			
		3333A	2.84
		8787A	8.71

# EFFINGHAM EQUITY

## Soil Test Results

<b>Prepared For:</b> Westridge Dairy <b>Farm:</b> <b>Field:</b> 08 <b>Crop Zone:</b> <b>Crop Year:</b>	<b>County:</b> Monroe, IL <b>Twp Rng Sec:</b> <b>Directions:</b>
<b>Acres:</b> 11.55	

**Layer Name:** 2007 -- Fertility Sites

**Date Sampled:** November 19, 2007

SampleID	LabID <small>none</small>	pH <small>none</small>	P1 <small>LbsPerAcre</small>	K <small>LbsPerAcre</small>
1		6.9	51	266
2		6.3	50	332
3		6.5	45	437
4		5.6	58	433
<b>Average:</b>		6.3	51	367

**Solution Runoff Class Matrix**

Hydrologic Soil Group			
A	B	C	D
Low	Medium	High	High

**P Input Matrix**

Application Method	Application Rate		
	<= UI Recommendations	>UI - 150% UI	>150% UI
Incorporation or injection > 3" below surface	Low	Low	Low
Shallowly incorporated surface applications <3 inches	Low	Medium	High
Non-incorporated surface applications	Medium	High	High

The table below identifies specific risk factors that may be present in a given field. No attempt should be made to "average" the factors and assign a composite rating for the field. It is recognized that the risk factors do not act independently to influence phosphorus loss from agricultural fields and P loading into water resources. Simple averaging however, assumes that all risk factors have the same amount of influence. Attempts to objectively weigh some factors more or less than others would be desirable but difficult without supporting data. The phosphorus assessment procedure is not a process based or empirical model. The procedure was developed as a conservation planning tool. The tool is designed to provide guidance to select and plan conservation measures that will lower the potential for phosphorus loss from agricultural fields and P loading into water resources.

Phosphorus Risk Potential	
Risk Factor	Site Value
Soil Erosion	<T
Proximity to water	High
Solution Runoff Potential	High
Soil Test Phosphorus	Medium
Phosphorus Inputs	Low

References:

- \* Sharpely, A.N., Determining An Environmentally Sound Soil Phosphorus Value Journal of Soil and Water Conservation, 1996.
- \* Sharpely, A.N., T. Daniel, T. Sims, J. Lemunyon, R. Stevens, And R. Parry, 1999 Agricultural Phosphorus and Eutrophication. U.S. Department of Agriculture, Agricultural Research Service, ARS-149, 42 pp.



Table 1. Nitrogen Risk Assessment

Nitrate loss potentials based on soil texture, timing, and nitrification inhibitors			
Application Timing <sup>1</sup>	Soil Texture <sup>2</sup>		
	Coarse	Medium	Fine
Fall with an inhibitor > 60° F	High	High	High
Fall with an inhibitor < 60° F	High	Medium	Medium
Fall without an inhibitor > 50° F	High	High	High
Fall without an inhibitor < 50° F	High	Medium	Medium
Spring without an inhibitor	Medium	Medium	Medium-Low
Spring with an inhibitor	Medium-Low	Low	Low
Spring split applied or sidedress	Medium-Low	Low	Low

## Foot Notes:

1. Temperatures refer to soil temperature measured at a depth of 4 inches. For this assessment, inhibitors refer to nitrification inhibitors.
2. Soil Texture: Coarse - sand, loamy sand, sandy loam  
Medium - silt, silt loam, loam  
Fine - silty clay loam, silty clay, clay, clay loam, sandy clay, loam, sandy clay

When developing recommendations to be included in a nutrient management plan, the planner needs to use the results of the assessment above with knowledge of locally significant transport processes.

For example, in large areas of northern and central Illinois, nitrates are detected in surface water resources at concentrations above 10 parts per million. Soils in much of the region only have a moderate nitrogen loss potential. The presence of extensive tile drainage, however, increases the risk of nitrate transport to surface water resources.

By contrast, in southern Illinois, there are large areas of level, poorly drained soil. The climate is warmer and there is more rainfall than in northern and central Illinois. The conditions favor the formation of nitrate. The loss of nitrate, however, is primary to the atmosphere due to denitrification.