

Conservation Plan

Westridge Dairy
2114 Ames Rd.
Red Bud, IL 62278

FSA Farm #3699

Field #13

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 71%. 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 stream near the field which requires a 200 foot setback in these areas. 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. A waterway is located within this field and should not have manure applied in it. Additionally areas of this field contain slopes of more than 5% which may not have manure applied on them when the ground is snow covered or frozen.

Soil Loss Calculation

Net C Factor RUSLE 2 – 0.25

Soil Conditioning Index – 0.09, 0.08

STIR Value – 28.04

Soil Type 3334A Calculated T Loss – 2.4

Acceptable T Loss – 5.00

Soil Type 8787A Calculated T Loss – 2.5

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 #13

File: Plan: Profile (Temp. scenario[1]) of Westridge Dairy*
Access Group: R2_NRCS_Fld_Office

Inputs:

Location: Illinois\Monroe County
 Soil: 3334A Birds silt loam, 0 to 2 percent slopes, frequently flooded\Birds 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	41.000

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: 2.4 t/ac/yr
 Detachment on slope: 2.4 t/ac/yr
 Soil loss for cons. plan: 2.4 t/ac/yr
 Sediment delivery: 2.4 t/ac/yr
 Net C factor: 0.25
 Net K factor: 0.34

Crit. slope length: --
 Surf. cover after planting: --

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/5/0	Cultivator, field w/ spike points		12
4/6/0	Planter, double disk opnr w/fluted coulter	Corn, silage	12
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		71
10/2/1	Manure spreader, solid and semi-solid		80
10/3/1	Disk, tandem light finishing		40

Soil conditioning index (SCI): 0.09
 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.



RUSLE2 Profile Erosion Calculation Record

Info: Field #13

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	41.000

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: 2.5 t/ac/yr
 Detachment on slope: 2.5 t/ac/yr
 Soil loss for cons. plan: 2.5 t/ac/yr
 Sediment delivery: 2.5 t/ac/yr
 Net C factor: 0.25
 Net K factor: 0.34

Crit. slope length: --
 Surf. cover after planting: --

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/5/0	Cultivator, field w/ spike points		12
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10/1/1	Harvest, killing crop 50pct standing stubble		71
10/2/1	Manure spreader, solid and semi-solid		80
10/3/1	Disk, tandem light finishing		40

Soil conditioning index (SCI): 0.08
 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 # 13
Field Name Wood Bridge
Land Owner Ralph & Janet Henry
FSA Farm # 3699
FSA Tract #
Tillable Acres 15.70
Application Acres 10.47
County Monroe
Township Precinct 9
Section 25

Proximity Location

- | | |
|---|---|
| <input 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 checked="" type="checkbox"/> Waterways |
| <input type="checkbox"/> Lake | <input type="checkbox"/> Drainage Ditches |

Provisions

- | | |
|--|-------------------------------|
| <input 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 checked="" 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 checked="" 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	15.70	Soybeans	
2009	15.70	Corn Silage	
2010	15.70	Soybeans	
2011	15.70	Corn Silage	

EFFINGHAM EQUITY



Application Restrictions

Prepared For: Westridge Dairy

Farm:

Field: 13

Crop Zone:

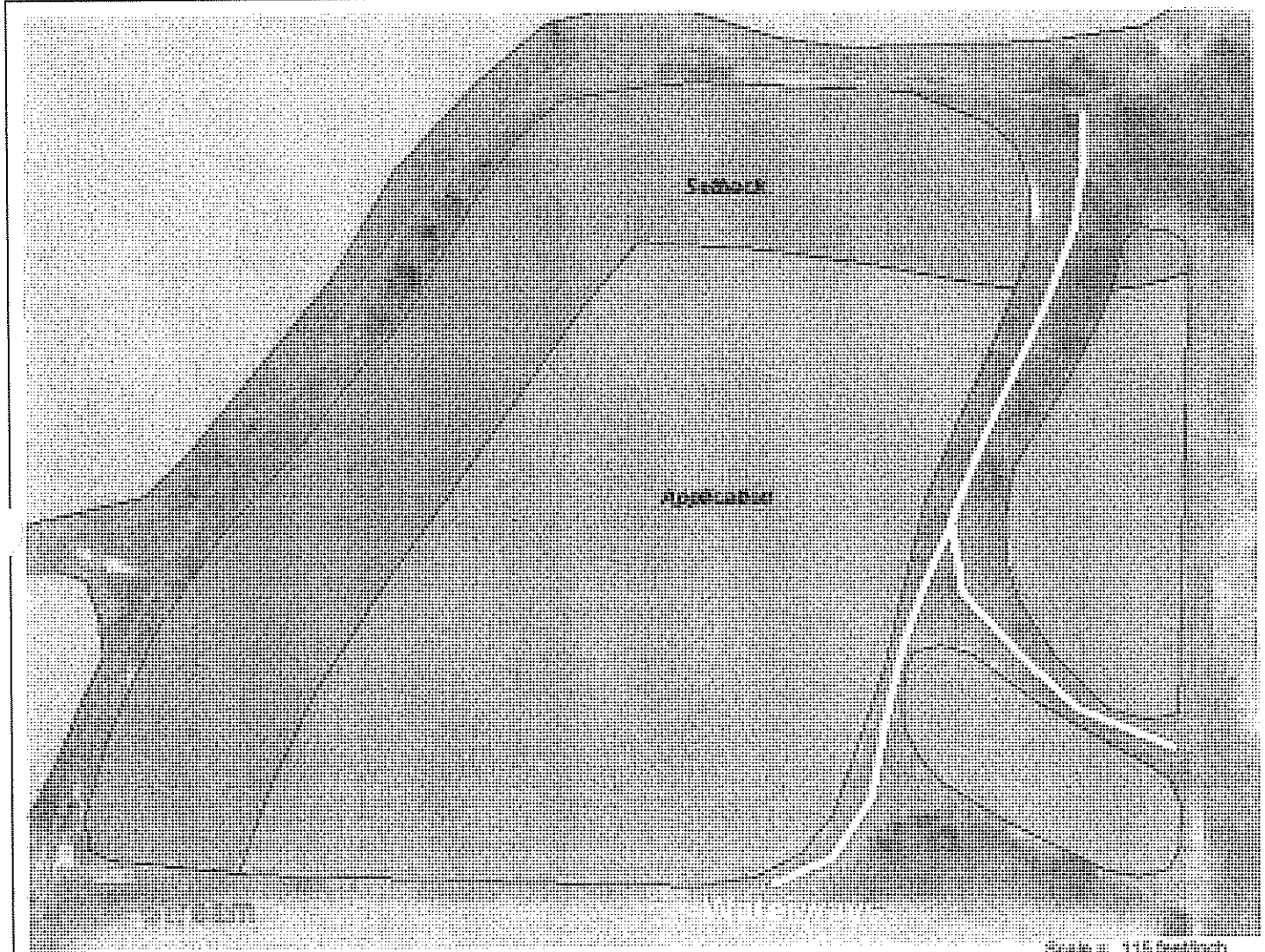
Crop Year:

Acres: 15.70

County: Monroe, IL

Twp Rng Sec: Precinct 9 25

Directions: Wood Bridge




Scale = 115 feet/inch

Layer Summary

Layer: Setbacks
Attribute: Application Restrictions
Acres: 15.70
Average:
Weighted Average:
Minimum:
Maximum:

Application Restrictions

-  Setback
-  Application

Acres

5.23

10.47

EFFINGHAM EQUITY

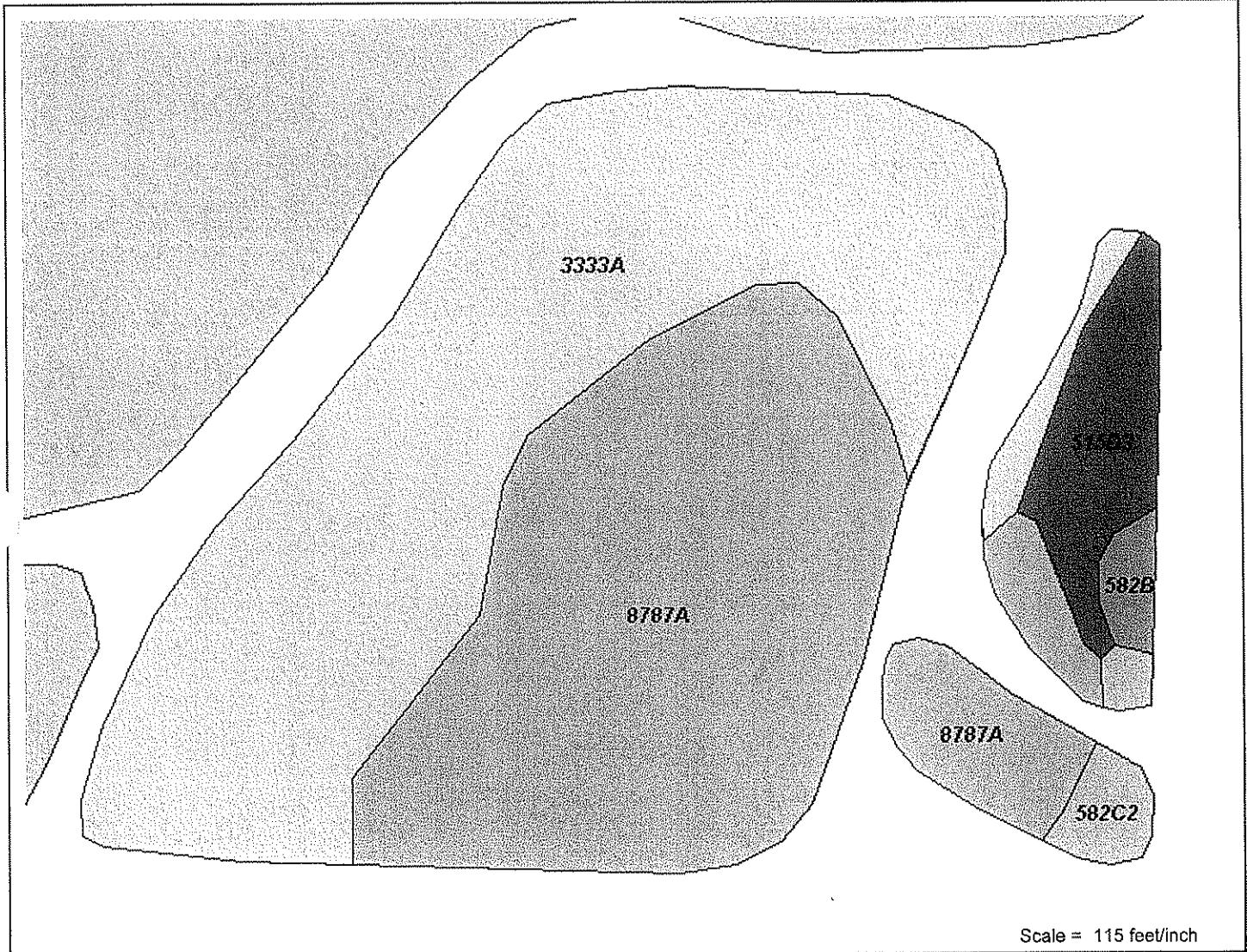
MUSYM



Prepared For: Westridge Dairy
 Farm:
 Field: 13
 Crop Zone:
 Crop Year:

County: Monroe, IL
 Twp Rng Sec: Precinct 9 25
 Directions: Wood Bridge

Acres: 15.70



Layer Summary		MUSYM	Acres
Layer:	Soil Type		
Attribute:	MUSYM		
Acres:	15.71		
Average:			
Weighted Average:			
Minimum:			
Maximum:			
		3333A	7.63
		515D3	.84
		8787A	6.76
		582B	.17
		582C2	.31

EFFINGHAM EQUITY

Soil Test Results

Prepared For: Westridge Dairy Farm: Field: 13 Crop Zone: Crop Year:	County: Monroe, IL Twp Rng Sec: Directions:
Acres: 15.70	

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		7.3	201	790
2		7.4	122	892
3		7.5	110	360
4		7.3	55	398
5		7.5	50	364
6		6.5	54	475
Average:		7.3	99	547

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	High
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 ¹	Soil Texture ²		
	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.