

Conservation Plan

Westridge Dairy
2114 Ames Rd.
Red Bud, IL 62278

FSA Farm #3699

Field #1

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

Tillage Practice – In preparation for the corn crop, manure will be applied, then the field will be worked with a field cultivator once. The corn will be planted in 30 inch rows, following silage removal the field will be planted to wheat. The surface residue prediction following silage removal is 33%. The wheat will be no-tilled in the silage field in 7 inch rows. The following spring the wheat will be chopped for silage. The surface residue prediction following wheat silage removal is 34%. Following silage removal the field will be no-tilled 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 be planted to wheat again. The wheat will be used as a cover crop for the winter between the soybean and corn crop rotation. The field will then lay idle until the next spring. The surface residue prediction following the wheat planting is 73%. 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. A waterway is located within this field and should not have manure applied in it. 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. 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 – 0.12
Soil Conditioning Index – 0.2
STIR Value – 26.73

Soil Type 515C3 Calculated T Loss – 3.5
Soil Type 582B Calculated T Loss – 2.7

Acceptable T Loss – 4.00
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 year's Waste Application Tab.



RUSLE2 Profile Erosion Calculation Record

Info: Field #1

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

Access Group: R2_NRCS_Fld_Office

Inputs:

Location: Illinois\Monroe County

Soil: 515C3 Bunkum silty clay loam, 5 to 10 percent slopes, severely eroded\Bunkum silty clay loam 90%

Slope length (horiz): 75 ft

Avg. slope steepness: 7.0 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Corn, silage	tons	25.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Wheat, winter silage	tons	11.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Soybean, mw 15 - 20 in rows	bu	44.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Wheat, winter cover	pounds	4000.0

Contouring: c. perfect contouring no row grade

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: 4.0 t/ac/yr

Soil loss erod. portion: 3.5 t/ac/yr

Detachment on slope: 3.5 t/ac/yr

Soil loss for cons. plan: 3.5 t/ac/yr

Sediment delivery: 3.5 t/ac/yr

Net C factor: 0.12

Net K factor: 0.36

Crit. slope length: 75 ft

Surf. cover after planting: --

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/4/0	Manure spreader, solid and semi-solid		55
4/5/0	Cultivator, field w/ spike points		65
4/6/0	Planter, double disk opnr w/fluted coulter	Corn, silage	67
9/28/0	Harvest, silage		33
10/1/0	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter silage	34

5/1/1	Harvest, silage		34
7/3/1	Planter, double disk opnr w/fluted coulter, 15 inch row spacing	Soybean, mw 15 - 20 in rows	35
10/1/1	Harvest, killing crop 50pct standing stubble		75
10/2/1	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter cover	73

Soil conditioning index (SCI): 0.2

STIR value: 26.73

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 #1

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

Access Group: R2_NRCS_Fld_Office

Inputs:

Location: Illinois\Monroe County

Soil: 582B Homen silt loam, 2 to 5 percent slopes\Homen silt loam 90%

Slope length (horiz): 150 ft

Avg. slope steepness: 3.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Corn, silage	tons	25.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Wheat, winter silage	tons	11.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Soybean, mw 15 - 20 in rows	bu	44.000
CMZ 16\c.Other Local Mgt Records\Westridge cs-whlage-sb	Wheat, winter cover	pounds	4000.0

Contouring: c. perfect contouring no row grade

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: 2.7 t/ac/yr

Detachment on slope: 2.7 t/ac/yr

Soil loss for cons. plan: 2.7 t/ac/yr

Sediment delivery: 2.7 t/ac/yr

Net C factor: 0.12

Net K factor: 0.42

Crit. slope length: 150 ft

Surf. cover after planting: --

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/4/0	Manure spreader, solid and semi-solid		55
4/5/0	Cultivator, field w/ spike points		65
4/6/0	Planter, double disk opnr w/fluted coulter	Corn, silage	67
9/28/0	Harvest, silage		33
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10/1/1	Harvest, killing crop 50pct standing stubble		75
10/2/1	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter cover	73

Soil conditioning index (SCI): 0.2

STIR value: 26.73

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.