

LAND TREATMENT PRACTICES

Land Treatment Practices Overview

Land treatment practices are to be applied to fields to limit the potential for runoff or other hazardous incidents from occurring due to land application of manure. As part of this element of the CNMP, the RUSLE2 program was run for each of the fields indicated in the plan. The results of RUSLE2 are outlined in the following RUSLE2 reports.

Current Management Practices for Fields in CNMP

The cropland utilized in this CNMP will be in a corn-soybean or corn-soybean-wheat. These fields utilize no-till on HEL acreage in years where manure is not applied, and fall field cultivation in years when manure is applied. The NHEL acreage is field cultivated in the spring. Wheat fields are interseeded with rye, and the wheat stubble is not baled which should keep erosion to a minimum on these fields. All fields were run using RUSLE2 as outlined below. More comprehensive RUSLE2 reports can also be found in the printed reports on the following pages. Fields that had a flat predominant soil type, but are classified as HEL, were run using the predominant soil type, as well as on the “slopes” for the more erosive soil type.

Fields	Soil Type	Crop	Yield Goal (bu or t/ac)	Soil Loss T	Current Soil Loss RUSLE2
1A Blue	257B2 Clarksdale silt loam, 2-5% slopes	Corn-Soy-Wheat	180/60/80	5.0	1.2
1B & 1D Blue	43A Ipava silt loam, 0-2% slopes	Corn-Soy	180/60	5.0	0.73
	6C2 Fishhook silt loam, 5-10% slopes			4.0	6.6
Miller 120	6C2 Fishhook silt loam, 5-10% slopes	Corn-Soy	180/60	4.0	6.6
1C Blue	43B2 Ipava silt loam, 2-5% slopes	Corn-Soy	180/60	5.0	2.2
N Blue, Kurt's N	6C2 Fishhook silt loam, 5-10% slopes	Corn-Soy-Wheat	170/55/80	4.0	2.3
D II North & Kurt's 80	279C2 Rozetta silt loam, 5-10% slopes	Corn-Soy-Wheat	150/50/70	5.0	2.7
D II Center	386B Downs silt loam, 2-5% slopes	Corn-Soy-Wheat	170/55/80	5.0	0.98
	971D3 Fishhook-Atlas Complex, 10-15% slopes			3.0	4.5

D II South	279B Rozetta silt loam, 2-5% slopes	Corn-Soy	170/55	5.0	3.2
	971D3 Fishhook-Atlas Complex, 10-15% slopes			3.0	10
Geischler's South	971D3 Fishhook-Atlas Complex, 10-15% slopes	Corn-Soy- Wheat	150/50/70	3.0	5.3
Bruenger, Geischler's North & Hog Farm South	6C2 Fishhook silt loam, 5-10% slopes	Corn-Soy- Wheat	150/50/70	4.0	2.7
Klinger (<i>NHEL</i>)	257B2 Clarksdale silt loam, 2-5% slopes	Corn-Soy	180/60	5.0	3.0
WP Woolbrink & Home Place	257B2 Clarksdale silt loam, 2-5% slopes	Corn-Soy	180/60	5.0	3.1
Kurt's South & Woolbrink	6C2 Fishhook silt loam, 5-10% slopes	Corn-Soy- Wheat	180/60/80	4.0	2.2
Hog Farm North	915D2 Elco-Ursa Complex, 10-15% slopes	Corn-Soy- Wheat	170/55/80	5.0	4.6

All fields meet soil loss T using currently or planned installed practices and current crop rotations & management except the fields below. Options for bringing fields under T are listed for producer alternatives.

1B & 1D Blue – Slopes:

Add wheat to the rotation at least every 5th year (C-S-C-S-W) or do not apply manure on slopes

Miller 120, Kraft NW & SE

Add wheat to the rotation at least every 5th year (C-S-C-S-W) or do not apply manure

D II Center - Slopes

Install a diversion in the middle of the slope AND contour AT LEAST at an 8% contour
OR do not apply manure on slopes

D II South - Slopes

Change to a corn-soybean-wheat rotation AND contour AT LEAST at a 5% contour
OR do not apply manure on slopes

Geischler's South

Contour AT LEAST 0.5% row grade OR do not apply manure on slopes

Land Treatment Practices Current & Planned

Nutrient Management – Code 590 – Animal manures and commercial fertilizer will be applied to land to help meet crop nutrient needs. Soil testing, manure analysis, and record keeping will be performed. (*current & planned- All Fields*)

Waste Utilization – Code 633 - Animal manures will be applied to land in an environmentally acceptable manner to maintain or improve soil, air, water, and plant resources. (*current & planned – All Fields*)

Residue Management – Code 329A –Land will be managed so as to distribute crops and residues over the soil surface year-round, and crops will be planted in narrow slots, or tilled residue strips previously untilled by full-width inversion implements to reduce sheet and rill erosion, wind erosion, maintain soil organic matter and tilth, conserve soil moisture, manage snow to increase plant available moisture, reduce plant damage from freezing, and to provide food and cover for wildlife. (*current & planned–All Fields- all ground is minimum till or no-tilled*)

Grassed Waterway – Code 412 – Construction of a channel that is shaped to allow for surface water flow, and established with suitable vegetation, in order to convey runoff from terraces, diversions, or other water concentrations without causing erosion or flooding, reduce gully erosion, and protect or improve water quality. (*current – Klinger, Woolbrink, DII North, Center, & South; none planned*)

Manure Transfer – Code 634 – Manure will be conveyed using structures, conduit, or equipment in order to transfer manure through a hopper, reception pit, pump, conduit, or hauling equipment to a manure storage facility, loading area, or to agricultural land for final utilization. (*current – drag hose system*)

Subsurface Drain – Code 606 – Use of a conduit installed underground to collect and/or convey drainage water to improve the soil environment for vegetative growth, reduce erosion, and improve water quality by regulating water table and ground water flows, intercepting and preventing water movement into a wet area, relieving artesian pressures, removing surface runoff, prevent leaching of saline and sodic soils, serving as an outlet for other subsurface drains, and regulating subirrigated areas or waste disposal areas, collect ground water for beneficial uses, remove water from heavy use areas, and regulate water to control health hazards.

Water & Sediment Control Basin – Code 638 – An earth embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin. Basins are established to improve the farmability of sloping land, reduce watercourse & gully erosion, trap sediment, reduce and manage onsite and downstream runoff, and improve downstream water quality.
(*Subsurface Drains & Water & Sediment Control Basins – current – Klinger, Woolbrink, DII N, WP Woolbrink, Home Place, Hog Farm N & S, North-Blue, Miller 120, , Bruenger, & Kurt's N, 1C-Blue, Kurt's South, North Blue, Hog Farm South, Geischler's North .*)

MANAGEMENTS USED IN RUSLE2 PLANNING

C-S Ffcult

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
11/1/0	Manure injector, liquid low disturb.30 inch		71
11/1/0	Cultivator, field 6-12 in sweeps		71
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	46
10/20/1	Harvest, killing crop 50pct standing stubble		85
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/2	Harvest, killing crop 50pct standing stubble		87

C-S, Sfcult corn, nt beans, low dist manure

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
4/1/0	Cultivator, field 6-12 in sweeps		57
4/1/0	Planter, double disk opnr w/fluted coulter	Corn, grain	57
10/20/0	Harvest, killing crop 50pct standing stubble		85
5/10/1	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/1	Harvest, killing crop 50pct standing stubble		90
10/5/1	Manure injector, liquid low disturb.30 inch		90

C-S NT, low dist Manure

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
4/1/0	Planter, double disk opnr w/fluted coulter	Corn, grain	70
10/15/0	Harvest, killing crop 50pct standing stubble		85
4/10/1	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	87
10/15/1	Harvest, killing crop 50pct standing stubble		85
10/15/1	Manure injector, liquid low disturb.30 inch		85

C-S-C-S-W, nt beans & wheat, fmaninj & ffcult Corn

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		79
5/1/1	Planter, double disk opnr w/fluted coulter	Corn, grain	71
10/15/1	Harvest, killing crop 50pct standing stubble		90
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	88
10/5/2	Harvest, killing crop 50pct standing stubble		88
11/1/2	Manure injector, liquid low disturb.30 inch		73
11/1/2	Cultivator, field 6-12 in sweeps		73
5/5/3	Planter, double disk opnr w/fluted coulter	Corn, grain	49
10/20/3	Harvest, killing crop 50pct standing stubble		85
5/10/4	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	85
10/5/4	Harvest, killing crop 50pct standing stubble		87
10/11/4	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	86
7/1/5	Harvest, killing crop 50pct standing stubble		93

C-S-W, ffcult with rye (ffcult after fmanure, no-till beans & wheat)

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		88
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	81
10/20/1	Harvest, killing crop 50pct standing stubble		90
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	88
10/5/2	Harvest, killing crop 50pct standing stubble		88
10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	86
7/1/3	Harvest, killing crop 50pct standing stubble		93
7/1/3	Begin growth	Rye, cereal interseeded growing cover	93

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
1A Blue

Inputs:

Location: Illinois\Hancock County
 Soil: 257B2 CLARKSDALE SILT LOAM, 2 TO 5 PERCENT SLOPES, ERODED\Clarksdale silt loam 100%
 Slope length (horiz): 150 ft
 Avg. slope steepness: 3.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Corn, grain	bushels	180.00
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Soybean, mw 7in rows	bu	60.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Wheat, winter 7in rows	bushels	80.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Rye, cereal interseeded growing cover	pounds	3000.0

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: 1.2 t/ac/yr
 Detachment on slope: 1.2 t/ac/yr
 Soil loss for cons. plan: 1.2 t/ac/yr
 Sediment delivery: 1.2 t/ac/yr
 Net C factor: 0.041
 Net K factor: 0.37

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

Date	Operation	Vegetation	Surf. res. cov. after op, %
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		88
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	81
10/20/1	Harvest, killing crop 50pct standing stubble		91
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	89
10/5/2	Harvest, killing crop 50pct standing stubble		88

10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	87
7/1/3	Harvest, killing crop 50pct standing stubble		93
7/1/3	Begin growth	Rye, cereal interseeded growing cover	93

Soil conditioning index (SCI): 0.8

Avg. annual slope STIR: 14.31

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
1B & 1D Blue

Inputs:

Location: Illinois\Hancock County
 Soil: 43A IPAVA SILT LOAM, 0 TO 2 PERCENT SLOPES\lpava silt loam 100%
 Slope length (horiz): 150 ft
 Avg. slope steepness: 1.0 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Corn, grain	bushels	180.00
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Soybean, mw 7in rows	bu	60.000

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: 0.77 t/ac/yr
 Detachment on slope: 0.77 t/ac/yr
 Soil loss for cons. plan: 0.77 t/ac/yr
 Sediment delivery: 0.77 t/ac/yr
 Net C factor: 0.11
 Net K factor: 0.28

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

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/1/0	Manure injector, liquid low disturb.30 inch		71
11/1/0	Cultivator, field 6-12 in sweeps		71
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	46
10/20/1	Harvest, killing crop 50pct standing stubble		85
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/2	Harvest, killing crop 50pct standing stubble		87

Soil conditioning index (SCI): 0.6
 Avg. annual slope STIR: 17.81

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
1C Blue

Inputs:

Location: Illinois\Hancock County

Soil: 43B2 IPAVA SILT LOAM, 2 TO 5 PERCENT SLOPES, ERODED\pava silt loam 100%

Slope length (horiz): 150 ft

Avg. slope steepness: 3.5 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i>Yield (# of units)</i>
CMZ 16\c.Other Local Mgt Records\C-S, sfcult corn, nt beans, low dist manure	Corn, grain	bushels	180.00
CMZ 16\c.Other Local Mgt Records\C-S, sfcult corn, nt beans, low dist manure	Soybean, mw 7in rows	bu	60.000

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: 2.2 t/ac/yr

Detachment on slope: 2.2 t/ac/yr

Soil loss for cons. plan: 2.2 t/ac/yr

Sediment delivery: 2.2 t/ac/yr

Net C factor: 0.096

Net K factor: 0.28

Crit. slope length: --

Surf. cover after planting: --

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
4/1/0	Cultivator, field 6-12 in sweeps		57
4/1/0	Planter, double disk opnr w/fluted coulter	Corn, grain	57
10/20/0	Harvest, killing crop 50pct standing stubble		85
5/10/1	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/1	Harvest, killing crop 50pct standing stubble		90
10/5/1	Manure injector, liquid low disturb.30 inch		90

Soil conditioning index (SCI): 0.5

Avg. annual slope STIR: 17.81

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**

Bruenger & Geischler's North & Hog Farm South fields

(Geischler's North field has terraces installed, but since the field meets T for sheet & rill erosion with the management & rotation, those terraces were not entered into RUSLE2; however for future plan purposes (i.e. CSP) they may be needed.)

Inputs:

Location: Illinois\Hancock County

Soil: 6C2 FISHHOOK SILT LOAM, 5 TO 10 PERCENT SLOPES, ERODED\Fishhook silt loam 100%

Slope length (horiz): 150 ft

Avg. slope steepness: 7.5 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i>Yield (# of units)</i>
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Corn, grain	bushels	150.00
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Soybean, mw 7in rows	bu	50.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Wheat, winter 7in rows	bushels	70.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Rye, cereal interseeded growing cover	pounds	3000.0

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: 4.0 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: 0.040

Net K factor: 0.37

Crit. slope length: --

Surf. cover after planting: --

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
8/1/0	Manure injector, liquid low disturb.30 inch		93
11/1/0	Cultivator, field 6-12 in sweeps		86
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	78
10/20/1	Harvest, killing crop 50pct standing stubble		87
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/2	Harvest, killing crop 50pct standing stubble		86
10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	85
7/1/3	Harvest, killing crop 50pct standing stubble		91
7/1/3	Begin growth	Rye, cereal interseeded growing cover	91

Soil conditioning index (SCI): 0.6

Avg. annual slope STIR: 14.31

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
D II Center

Inputs:

Location: Illinois\Hancock County
Soil: 386B DOWNS SILT LOAM, 2 TO 5 PERCENT SLOPES\Downs silt loam 100%
Slope length (horiz): 150 ft
Avg. slope steepness: 3.5 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i>Yield (# of units)</i>
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Corn, grain	bushels	170.00
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Soybean, mw 7in rows	bu	55.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Wheat, winter 7in rows	bushels	80.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Rye, cereal interseeded growing cover	pounds	3000.0

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: 0.98 t/ac/yr
Detachment on slope: 0.98 t/ac/yr
Soil loss for cons. plan: 0.98 t/ac/yr
Sediment delivery: 0.98 t/ac/yr
Net C factor: 0.038
Net K factor: 0.32

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

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		88
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	81
10/20/1	Harvest, killing crop 50pct standing stubble		90
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	88
10/5/2	Harvest, killing crop 50pct standing stubble		88

10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	86
7/1/3	Harvest, killing crop 50pct standing stubble		93
7/1/3	Begin growth	Rye, cereal interseeded growing cover	93

Soil conditioning index (SCI): 0.8

Avg. annual slope STIR: 14.31

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
D II North & Kurt's 80

Inputs:

Location: Illinois\Hancock County

Soil: 279C2 ROZETTA SILT LOAM, 5 TO 10 PERCENT SLOPES, ERODED\Rozetta silt loam 100%

Slope length (horiz): 150 ft

Avg. slope steepness: 7.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Corn, grain	bushels	150.00
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Soybean, mw 7in rows	bu	50.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Wheat, winter 7in rows	bushels	70.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Rye, cereal interseeded growing cover	pounds	3000.0

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: 2.7 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: 0.040

Net K factor: 0.37

Crit. slope length: --

Surf. cover after planting: --

Date	Operation	Vegetation	Surf. res. cov. after op, %
8/1/0	Manure injector, liquid low disturb.30 inch		93
11/1/0	Cultivator, field 6-12 in sweeps		86
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	78
10/20/1	Harvest, killing crop 50pct standing stubble		87
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/2	Harvest, killing crop 50pct standing stubble		86

10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	85
7/1/3	Harvest, killing crop 50pct standing stubble		91
7/1/3	Begin growth	Rye, cereal interseeded growing cover	91

Soil conditioning index (SCI): 0.6

Avg. annual slope STIR: 14.31

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
D II South – flat (279B)

Inputs:

Location: Illinois\Hancock County
Soil: 279B ROZETTA SILT LOAM, 2 TO 5 PERCENT SLOPES\Rozetta silt loam 100%
Slope length (horiz): 150 ft
Avg. slope steepness: 3.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Corn, grain	bushels	170.00
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Soybean, mw 7in rows	bu	55.000

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: 3.2 t/ac/yr
Detachment on slope: 3.2 t/ac/yr
Soil loss for cons. plan: 3.2 t/ac/yr
Sediment delivery: 3.2 t/ac/yr
Net C factor: 0.10
Net K factor: 0.37

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

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/1/0	Manure injector, liquid low disturb.30 inch		69
11/1/0	Cultivator, field 6-12 in sweeps		69
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	45
10/20/1	Harvest, killing crop 50pct standing stubble		83
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	83
10/5/2	Harvest, killing crop 50pct standing stubble		86

Soil conditioning index (SCI): 0.3
Avg. annual slope STIR: 17.81

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
D I South

Inputs:

Location: Illinois\Hancock County
Soil: 257B2 CLARKSDALE SILT LOAM, 2 TO 5 PERCENT SLOPES, ERODED\Clarksdale silt loam 100%
Slope length (horiz): 150 ft
Avg. slope steepness: 3.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Corn, grain	bushels	170.00
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Soybean, mw 7in rows	bu	55.000

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: 3.2 t/ac/yr
Detachment on slope: 3.2 t/ac/yr
Soil loss for cons. plan: 3.2 t/ac/yr
Sediment delivery: 3.2 t/ac/yr
Net C factor: 0.11
Net K factor: 0.37

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

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/1/0	Manure injector, liquid low disturb.30 inch		69
11/1/0	Cultivator, field 6-12 in sweeps		69
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	45
10/20/1	Harvest, killing crop 50pct standing stubble		83
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	83
10/5/2	Harvest, killing crop 50pct standing stubble		86

Soil conditioning index (SCI): 0.3
Avg. annual slope STIR: 17.81

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
Hog Farm North

Inputs:

Location: Illinois\Hancock County

Soil: 915D2 ELCO-URSA COMPLEX, 10 TO 15 PERCENT SLOPES, ERODED\Elco silt loam 45%

Slope length (horiz): 150 ft

Avg. slope steepness: 13 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i>Yield (# of units)</i>
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Corn, grain	bushels	170.00
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Soybean, mw 7in rows	bu	55.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Wheat, winter 7in rows	bushels	80.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Rye, cereal interseeded growing cover	pounds	3000.0

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: 4.6 t/ac/yr

Detachment on slope: 4.6 t/ac/yr

Soil loss for cons. plan: 4.6 t/ac/yr

Sediment delivery: 4.6 t/ac/yr

Net C factor: 0.032

Net K factor: 0.37

Crit. slope length: --

Surf. cover after planting: --

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		88
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	81
10/20/1	Harvest, killing crop 50pct standing stubble		90
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	88
10/5/2	Harvest, killing crop 50pct standing stubble		88
10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	86
7/1/3	Harvest, killing crop 50pct standing stubble		93
7/1/3	Begin growth	Rye, cereal interseeded growing cover	93

Soil conditioning index (SCI): 0.5

Avg. annual slope STIR: 14.31

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
Kurt's South & Woolbrink

Inputs:

Location: Illinois\Hancock County
Soil: 6C2 FISHHOOK SILT LOAM, 5 TO 10 PERCENT SLOPES, ERODED\Fishhook silt loam 100%
Slope length (horiz): 150 ft
Avg. slope steepness: 7.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Corn, grain	bushels	180.00
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Soybean, mw 7in rows	bu	60.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Wheat, winter 7in rows	bushels	80.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Rye, cereal interseeded growing cover	pounds	3000.0

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: 4.0 t/ac/yr
Soil loss erod. portion: 2.2 t/ac/yr
Detachment on slope: 2.2 t/ac/yr
Soil loss for cons. plan: 2.2 t/ac/yr
Sediment delivery: 2.2 t/ac/yr
Net C factor: 0.033
Net K factor: 0.37

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

Date	Operation	Vegetation	Surf. res. cov. after op, %
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		88
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	81
10/20/1	Harvest, killing crop 50pct standing stubble		91
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	89
10/5/2	Harvest, killing crop 50pct standing stubble		88

10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	87
7/1/3	Harvest, killing crop 50pct standing stubble		93
7/1/3	Begin growth	Rye, cereal interseeded growing cover	93

Soil conditioning index (SCI): 0.7

Avg. annual slope STIR: 14.31

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
North Blue, Kurt's North, & Kraft SW fields

Inputs:

Location: Illinois\Hancock County
 Soil: 6C2 FISHHOOK SILT LOAM, 5 TO 10 PERCENT SLOPES, ERODED\Fishhook silt loam 100%
 Slope length (horiz): 150 ft
 Avg. slope steepness: 7.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Corn, grain	bushels	170.00
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Soybean, mw 7in rows	bu	55.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Wheat, winter 7in rows	bushels	80.000
CMZ 16\c.Other Local Mgt Records\C-S-W, manure, ffcult, with rye	Rye, cereal interseeded growing cover	pounds	3000.0

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: 4.0 t/ac/yr
 Soil loss erod. portion: 2.3 t/ac/yr
 Detachment on slope: 2.3 t/ac/yr
 Soil loss for cons. plan: 2.3 t/ac/yr
 Sediment delivery: 2.3 t/ac/yr
 Net C factor: 0.035
 Net K factor: 0.37

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

Date	Operation	Vegetation	Surf. res. cov. after op, %
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		88
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	81
10/20/1	Harvest, killing crop 50pct standing stubble		90
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	88
10/5/2	Harvest, killing crop 50pct standing stubble		88

10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	86
7/1/3	Harvest, killing crop 50pct standing stubble		93
7/1/3	Begin growth	Rye, cereal interseeded growing cover	93

Soil conditioning index (SCI): 0.7

Avg. annual slope STIR: 14.31

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
West Point Woolbrink & Home Place

Inputs:

Location: Illinois\Hancock County
 Soil: 257B2 CLARKSDALE SILT LOAM, 2 TO 5 PERCENT SLOPES, ERODED\Clarksdale silt loam 100%
 Slope length (horiz): 150 ft
 Avg. slope steepness: 3.5 %

Management	Vegetation	Yield units	Yield (# of units)
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Corn, grain	bushels	180.00
CMZ 16\c.Other Local Mgt Records\C-S ffcult	Soybean, mw 7in rows	bu	60.000

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: 0.10
 Net K factor: 0.37

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

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/1/0	Manure injector, liquid low disturb.30 inch		71
11/1/0	Cultivator, field 6-12 in sweeps		71
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	46
10/20/1	Harvest, killing crop 50pct standing stubble		85
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/2	Harvest, killing crop 50pct standing stubble		87

Soil conditioning index (SCI): 0.4
 Avg. annual slope STIR: 17.81

RUSLE2 Profile Erosion Calculation Record

Info: **North Fork Pork, LLC**
Klinger fields (NHEL)

Inputs:

Location: Illinois\Hancock County

Soil: 257B2 CLARKSDALE SILT LOAM, 2 TO 5 PERCENT SLOPES, ERODED\Clarksdale silt loam 100%

Slope length (horiz): 150 ft

Avg. slope steepness: 3.5 %

<i>Management</i>	<i>Vegetation</i>	<i>Yield units</i>	<i>Yield (# of units)</i>
CMZ 16\c.Other Local Mgt Records\C-S, sfcult corn, nt beans, low dist manure	Corn, grain	bushels	180.00
CMZ 16\c.Other Local Mgt Records\C-S, sfcult corn, nt beans, low dist manure	Soybean, mw 7in rows	bu	60.000

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: 3.0 t/ac/yr

Detachment on slope: 3.0 t/ac/yr

Soil loss for cons. plan: 3.0 t/ac/yr

Sediment delivery: 3.0 t/ac/yr

Net C factor: 0.097

Net K factor: 0.37

Crit. slope length: --

Surf. cover after planting: --

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
11/1/0	Manure injector, liquid low disturb.30 inch		81
4/1/1	Cultivator, field 6-12 in sweeps		53
4/1/1	Planter, double disk opnr w/fluted coulter	Corn, grain	53
10/20/1	Harvest, killing crop 50pct standing stubble		85
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/2	Harvest, killing crop 50pct standing stubble		90
10/5/2	Manure injector, liquid low disturb.30 inch		90

Soil conditioning index (SCI): 0.4

Avg. annual slope STIR: 18.98

RUSLE2 Worksheet Erosion Calculation Record

Info: **North Fork Pork, LLC**

D II Center, D II South – slopes – 971D3

Geischler's South – 971D3

Options to bring fields under T – diversion/terraces & contouring

These fields are all avoided for manure application under an N rate basis

Inputs:

Owner name: North Fork Pork, LLC

Field name: 971D3

Location: Illinois\Hancock County

Soil: 971D3 FISHHOOK-ATLAS COMPLEX, 10 TO 15 PERCENT SLOPES, SEVERELY ERODED\Fishhook silty clay loam 45%

Slope length (horiz): 150 ft

Avg. slope steepness: 13 %

Outputs:

<i>Management</i>	<i>Contouring</i>	<i>Fields</i>	<i>Diversion/terrace, sediment basin</i>	<i>Soil loss erod. portion, t/ac/yr</i>	<i>Soil detachment, t/ac/yr</i>	<i>Cons. plan. soil loss, t/ac/yr</i>	<i>Sed. delivery, t/ac/yr</i>
c.Other Local Mgt Records\C-S-W, manure, ffult, with rye	default	D II Ctr	(none)	4.5	4.5	4.5	4.5
c.Other Local Mgt Records\C-S-W, manure, ffult, with rye	b. absolute row grade 8 percent	D II Ctr	1 Diversion 0.5% grade in middle of RUSLE slope	3.2	3.2	3.0	2.9
c.Other Local Mgt Records\C-S ffult	default	D II South	1 gradient terrace 0.5% grade in middle of RUSLE slope	10	10	8.5	7.2
c.Other Local Mgt Records\C-S-W, manure, ffult, with rye	b. absolute row grade 5 percent	D II South	1 gradient terrace 0.5% grade in middle of RUSLE slope	3.1	3.1	3.0	2.9
c.Other Local Mgt Records\C-S-W, manure, ffult, with rye	default	Geis S	(none)	5.3	5.3	5.3	5.3
c.Other Local Mgt Records\C-S-W, manure, ffult, with rye	b. absolute row grade 0.5 percent	Geis S	(none)	3.0	3.0	3.0	3.0

C-S Ffcult

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
11/1/0	Manure injector, liquid low disturb.30 inch		71
11/1/0	Cultivator, field 6-12 in sweeps		71
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	46
10/20/1	Harvest, killing crop 50pct standing stubble		85
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	84
10/5/2	Harvest, killing crop 50pct standing stubble		87

C-S-W, ffcult after manure, nt beans & wheat (manure, ffcult with rye)

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
8/1/0	Manure injector, liquid low disturb.30 inch		95
11/1/0	Cultivator, field 6-12 in sweeps		88
5/5/1	Planter, double disk opnr w/fluted coulter	Corn, grain	81
10/20/1	Harvest, killing crop 50pct standing stubble		90
5/10/2	Drill or airseeder, double disk, w/ fluted coulters	Soybean, mw 7in rows	88
10/5/2	Harvest, killing crop 50pct standing stubble		88
10/11/2	Drill or airseeder, double disk, w/ fluted coulters	Wheat, winter 7in rows	86
7/1/3	Harvest, killing crop 50pct standing stubble		93
7/1/3	Begin growth	Rye, cereal interseeded growing cover	93