

SoilCalculator



SOIL SAVINGS PLAN

Client: Joe Landowner
Farm: Maple
Location: Carroll County, IA



Field	Sec/Twp/Rng	Acres
Field A	002-082N-036W	148.86

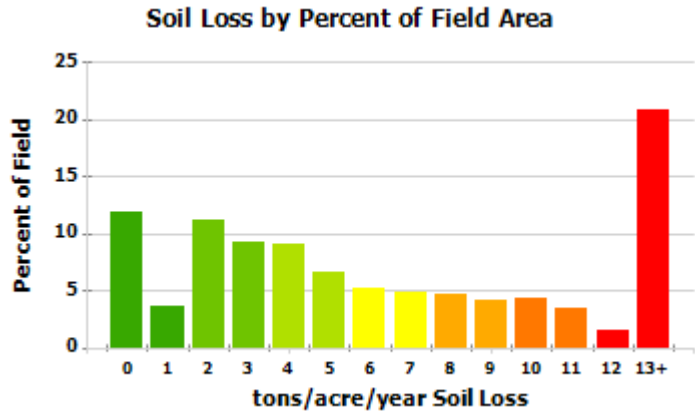
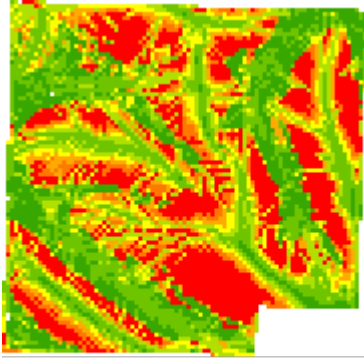
Soil Savings Summary

	Alternative 1	Alternative 2	Alternative 3
Crop rotation and operations	Corn/Soybean rotation; field cultivate in fall and spring before planting corn and fall coulters rip and spring field cultivate before planting soybeans.	Corn/Soybean; no-till corn into soybean stubble and spring field cultivate before planting soybeans.	Corn/Soybean; no-till both crops.
Supporting practices	none	none	none
1 year soil loss (tons/acre)			
Field average	7.06 tons	4.95 tons	1.28 tons
Top 20% most erodible average	16.81 tons	11.51 tons	2.34 tons
10 year soil loss (inches/acre)			
Field average	0.479 inches	0.336 inches	0.087 inches
Top 20% most erodible average	1.142 inches	0.782 inches	0.159 inches

Calculated Soil Loss

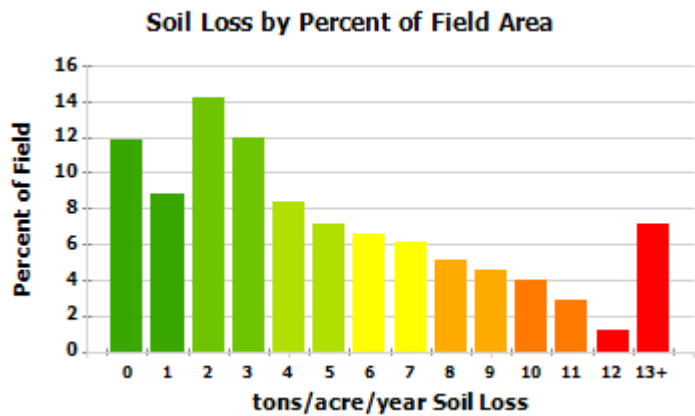
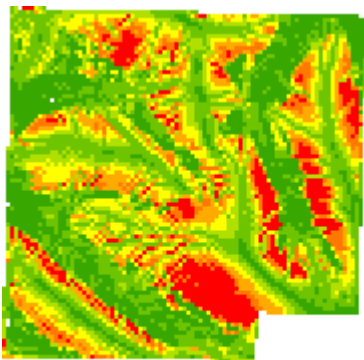
Alternative 1

1045.78 tons/yr annual soil loss



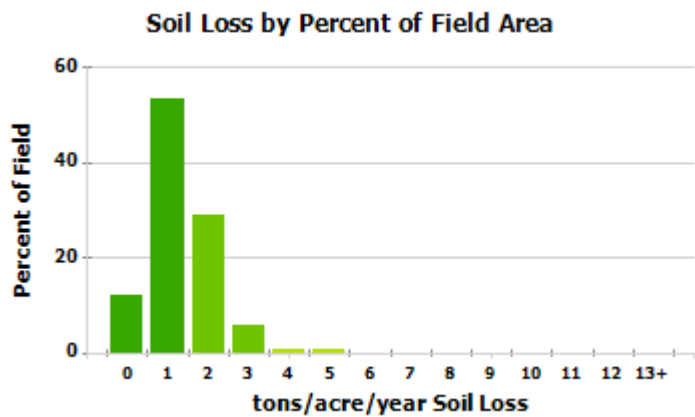
Alternative 2

733.06 tons/yr annual soil loss



Alternative 3

189.29 tons/yr annual soil loss



Economic Impact

Inputs: Corn: \$4.00/bu
 Nitrogen: \$0.47/lb
 Phosphate: \$0.48/lb
 Potash: \$0.41/lb

Alternative 1

Year	Cumulative Yield Loss/Acre	+	Cumulative Nutrient Loss/Acre	=	Total Yield & Nutrient Loss/Acre	x acres	My Total Cumulative Erosion Cost
1	\$0.56		\$37.18		\$37.74		\$5,618.03
3	\$3.39		\$111.53		\$114.91		\$17,106.16
5	\$8.47		\$185.88		\$194.35		\$28,930.38
10	\$31.04		\$371.76		\$402.80		\$59,961.35
20	\$118.53		\$743.52		\$862.05		\$128,325.06

0.48" of top soil will be lost every ten years under Alternative 1 totaling approximately \$59,961 in lost yield and nutrients.

Alternative 2

Year	Cumulative Yield Loss/Acre	+	Cumulative Nutrient Loss/Acre	=	Total Yield & Nutrient Loss/Acre	x acres	My Total Cumulative Erosion Cost
1	\$0.40		\$26.06		\$26.45		\$3,938.07
3	\$2.37		\$78.18		\$80.55		\$11,990.90
5	\$5.93		\$130.30		\$136.23		\$20,279.32
10	\$21.76		\$260.59		\$282.35		\$42,031.08
20	\$83.09		\$521.18		\$604.27		\$89,951.96

0.34" of top soil will be lost every ten years under Alternative 2 totaling approximately \$42,031 in lost yield and nutrients.

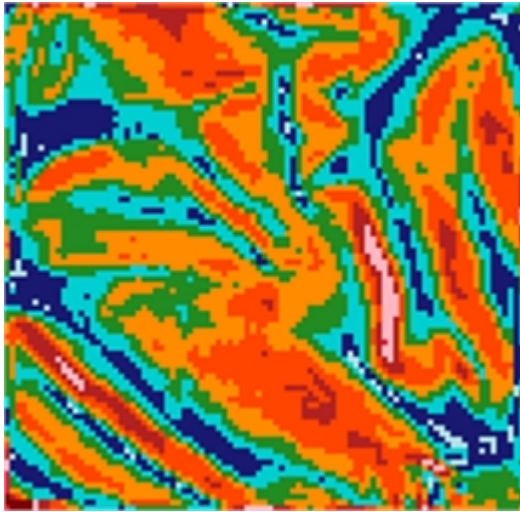
Alternative 3

Year	Cumulative Yield Loss/Acre	+	Cumulative Nutrient Loss/Acre	=	Total Yield & Nutrient Loss/Acre	x acres	My Total Cumulative Erosion Cost
1	\$0.10		\$6.73		\$6.83		\$1,016.91
3	\$0.61		\$20.19		\$20.80		\$3,096.35
5	\$1.53		\$33.65		\$35.18		\$5,236.62
10	\$5.62		\$67.29		\$72.91		\$10,853.47
20	\$21.46		\$134.58		\$156.04		\$23,227.83

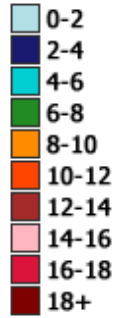
0.09" of top soil will be lost every ten years under Alternative 3 totaling approximately \$10,853 in lost yield and nutrients.

Slope & Soils Summary

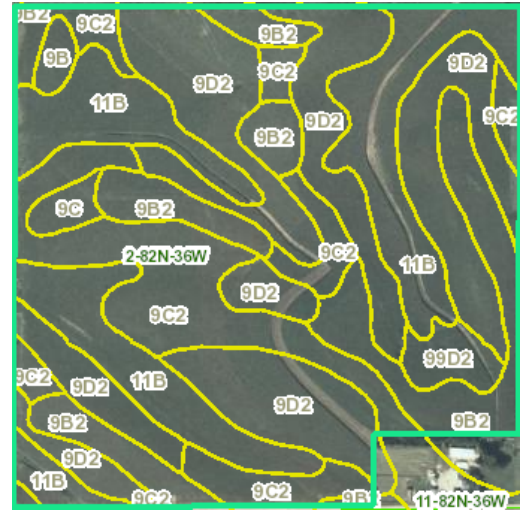
Slope Steepness



% Slope



Soils



Soil Map Unit (SMU)	Map Unit Name	Acres	Area	Slope Steepness
99D2	Exira silty clay loam, 9 to 14 percent slopes, moderately erode	3.2	2 %	8.63 %
9C2	Marshall silty clay loam, 5 to 9 percent slopes, moderately eroded	30.44	21 %	7.75 %
9B2	Marshall silty clay loam, 2 to 5 percent slopes, moderately eroded	23.66	16 %	5.56 %
9D2	Marshall silty clay loam, 9 to 14 percent slopes, moderately eroded	52.7	36 %	9.49 %
11B	Colo-Judson silty clay loams, 2 to 5 percent slopes	35.07	24 %	4.6 %
9B	Marshall silty clay loam, 2 to 5 percent slopes	1.46	1 %	6.36 %
9C	Marshall silty clay loam, 5 to 9 percent slopes	1.78	1 %	6.67 %
		148.86	100%	

Disclaimer

Id: cefa62d9741848778b4140917bde6a81
Application: 1.74
Service: 1.0.5633.27273
Rome: 2.5.2.20
R2Dp: 3.12.1.0

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Field A - Alternative 1

Crop Rotations and Operations

Date	Rotation and Subtype	Crop and Subtype	Avg. Yield (# harvest units)	Residue (lb/ac)
11/3/1	Cultivator, field 6-12 in sweeps			
4/10/2	Cultivator, field 6-12 in sweeps			
5/1/2	Planter, double disk opnr	Corn, grain	170	
5/3/2	Sprayer, pre-emergence			
6/7/2	Sprayer, post emergence and fert. tank mix			250
10/20/2	Harvest, killing crop 50pct standing stubble			3136
11/1/2	Subsoiler, inline heavy shanks with coulter caddy			
5/15/3	Cultivator, field 6-12 in sweeps			
5/15/3	Sprayer, pre-emergence			
5/15/3	planter, double disk opnr	Soybean, mw 30 in rows	50	
6/28/3	Sprayer, post emergence			0
8/1/3	Sprayer, insecticide post emergence			
10/10/3	Harvest, killing crop 20pct standing stubble			866

Supporting Conservation Practices

Practice	Area	Other Notes
None		

Field A - Alternative 2

Crop Rotations and Operations

Date	Rotation and Subtype	Crop and Subtype	Avg. Yield (# harvest units)	Residue (lb/ac)
5/1/1	Planter, double disk opnr w/fluted coulter	Corn, grain	170	
5/1/1	Sprayer, pre-emergence			
6/7/1	Sprayer, post emergence			0
10/20/1	Harvest, killing crop 50pct standing stubble			3136
5/15/2	Cultivator, field 6-12 in sweeps			
5/15/2	Sprayer, pre-emergence			
5/15/2	planter, double disk opnr	Soybean, mw 30 in rows	50	
6/28/2	Sprayer, post emergence			0
8/1/2	Sprayer, insecticide post emergence			
10/10/2	Harvest, killing crop 20pct standing stubble			866

Supporting Conservation Practices

Practice	Area	Other Notes
None		

Field A - Alternative 3

Crop Rotations and Operations

Date	Rotation and Subtype	Crop and Subtype	Avg. Yield (# harvest units)	Residue (lb/ac)
5/1/1	Planter, double disk opnr w/fluted coulter	Corn, grain	170	
5/1/1	Sprayer, pre-emergence			
6/7/1	Sprayer, post emergence			0
10/20/1	Harvest, killing crop 50pct standing stubble			3136
5/15/2	Sprayer, pre-emergence			
5/15/2	Planter, strip till	Soybean, mw 30 in rows	50	
6/28/2	Sprayer, post emergence			0
8/1/2	Sprayer, insecticide post emergence			
9/24/2	Harvest, killing crop 20pct standing stubble			939

Supporting Conservation Practices

Practice	Area	Other Notes
None		