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EC88-116 Universal Soil Loss Equation: A Handbook for Nebraska Producers

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Nebraska Cooperative Extension Service EC 88-116

Universal Soil Loss Equation: A Handbook for Nebraska Producers





Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Leo E. Lucas, Director of Cooperative Extension Service, University of Nebraska, Institute of Agriculture and Natural Resources.



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INTRODUCTION

Tons of soil are lost from agricultural fields in Nebraska each year as a result of water erosion. The accelerated loss of topsoil reduces the availability of plant nutrients and water needed for optimum crop production. In addition, the eroded soil frequently moves into surface waters causing sediment to be deposited in streams and reservoirs and nutrients to be released into other biological systems.

Conservation practices have been applied to the land for decades in an effort to control soil erosion. These practices may include reduced tillage, residue management, crop rotation, strip and contour cropping, terraces and waterways. Alone or in combination, these practices can be used to reduce erosion to the extent that the long term productivity of the soil is not diminished.

In portions of the United States where water is the major cause of soil erosion, the Universal Soil Loss Equation (USLE) is used to estimate the potential average annual rate of soil erosion. The estimates take into consideration cropping systems, management practices, soil type, rainfall pattern and topography of a field. The USLE can provide guidelines for conservation planning by comparing the potential erosion control of various conservation practices with predetermined soil loss tolerance values.

Erosion evaluated by the USLE includes sheet and rill erosion only. Sheet erosion refers to the removal of a

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fairly uniform layer of surface soil by runoff. Rill erosion is the process of soil loss in numerous small channels which are only a few inches deep. Gully erosion, which is very evident on some landscapes is not considered in the soil loss estimates made by the USLE.

State and federal legislation encourages each agricultural producer to be responsible for soil erosion that occurs on his or her farm land. The material presented in this workbook is compatible with the Soil Conservation Service technical guidelines used to identify appropriate conservation practices for highly erodible lands that are affected by water.

The purposes of this workbook are to provide an understanding of how soil erosion estimates are determined, to estimate erosion control resulting from numerous cropping systems, and to inform the producer of alternative practices which may be considered in developing a conservation plan.

APPLICATION OF THE USLE

The USLE was developed to estimate potential soil loss on a soil management unit. For that reason it is best to use generalized information for a field when using this workbook. If you look at a soil survey, you will notice that several soil types often occur in a single field. Likewise the percent slope and associated length of slope might vary as you move from the top to the bottom of a hill. The predominant soil type, and the average percent slope and total length of slope for the field should be used for USLE purposes.

Field No.	Soil Type	% Slope	Slope Length (ft)	R	x	K	x	LS	x	С	x	P	=	A
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						1	19	-05						
									Ten de					

Universal Soil Loss Equation Problem Solving

A. J. Jones and D. Walters¹

The Universal Soil Loss Equation (USLE) is used to estimate soil loss caused by water erosion. The equation considers five factors:

 $\mathbf{A} = \mathbf{R} \mathbf{x} \mathbf{K} \mathbf{x} \mathbf{L} \mathbf{S} \mathbf{x} \mathbf{C} \mathbf{x} \mathbf{P}$

¹Ext. Soil Erosion Control/Conservation Tillage Specialist and Asst. Prof. of Soils, Univ. of Nebr., Lincoln, respectively.

where

- A = estimated soil loss in tons per acre per year
- \mathbf{R} = rainfall factor
- K = soil factor
- LS = topographic factor
- C = cover and management factor
- P = conservation factor

To work through the following examples and to estimate soil loss on your farm you will also need to read the following chapters in this publication:

Universal Soil Loss Equation - Rainfall and Topographic Factors

Universal Soil Loss Equation - Soil Erodibility and Soil Loss Tolerance

Universal Soil Loss Equation - Cover and Management Practices

Universal Soil Loss Equation - Conservation Practices

Information contained in this publication is based on Agricultural Handbook 537 published by the Agricultural Research Service, USDA and corresponds with the Soil Conservation Service Nebraska Technical Guide. The information is intended 1) to provide an understanding of soil loss and its relationship to water erosion and 2) to allow you to identify crop, management and conservation practices which are most effective in reducing soil erosion. Estimates of soil loss using this publication are not intended to replace the official USLE estimates made by your local Soil Conservation Service office in the development of a conservation plan.

The USLE can be used to estimate much information related to natural soil erosion and erosion reduction resulting from farming practice. The questions asked most often about soil erosion which can be answered by the USLE are presented below.

EXAMPLE 1. What is the potential average annual soil erosion rate for my field in a clean tilled, fallow condition? The field chosen for evaluation is a Moody silty clay loam in Platte County. The hillside has a 6 percent slope that is 200 feet long. The rainfall value (R) for Platte Co. is 150; the soil erodibility value (K) for Moody silt loam is 0.32; the topographic value (LS) is 0.95. These values can be obtained from USLE-Rainfall and Topographic Factors (R,LS) and USLE-Soil Erodibility (K) and Soil Loss Tolerance chapters in this publication. The potential annual soil loss from this fallow hillslope would be 46 ton per acre per year:

 $A = (R \times K \times LS) = 150 \times 0.32 \times 0.95 = 46 \text{ tons}$

EXAMPLE 2. How much soil loss can occur by cropping this hillside to a corn-soybean rotation? This crop rotation has two crop sequences—corn planted into soybean residue (Co-B) and soybean planted into corn residue (B-Co). Crops are planted up and down the hillside. For the Co-B sequence assume you field cultivate the soybean residue one time prior to planting. After planting there is approximately 20 percent residue on the soil surface. The C value for a Co-B sequence and tillage leaving 20 percent residue is 0.31. For the B-Co sequence, assume the corn residue is disked two times leaving 30 percent residue after planting. The C value for this cropping combination is 0.16. The average C value for the corn-soybean rotation would be $(0.31 + 0.16) \div 2 = 0.24$. C values are found in the USLE-Cover and Management Practice chapter of this publication. The average annual soil loss for the field in Example 1 using cover and management practices presented above is 11 tons per acre per year:

$$A = (R \times K \times LS) \times C = (46) \times 0.24 = 11 \text{ tons}$$

EXAMPLE 3. I do not want to terrce my hillside. How much erosion reduction would occur if I contour farm the hillside using the cover and management practices from Example 2? The hillside is 200 feet long and has a 6 percent slope. Contour farming this hillside is given a conservation practice value (P) of 0.5. P values are found in the USLE-Conservation Practice chapter of this publication. Average annual soil loss for the field now would be 6 ton per acre per year:

 $A = (R \times K \times LS \times C) \times P = (11) \times 0.5 = 6 \text{ tons}$

EXAMPLE 4. I must lower my soil loss to the tolerance limit (T). I contour farm and do not want to change or add other conservation practices (P factor). What cover and management practices (C factor) can I use? The soil loss tolerance (T) for Moody silty clay loam soil is 5 ton per acre per year. T values can be found in the USLE-Soil Erodibility and Soil Loss Tolerance chapter of this publication. To solve the USLE for C, the following formula is used:

$$C = \frac{T}{R \times K \times LS \times P}$$

Using the factors presented in previous examples the C value which would reduce soil loss to 5 ton is:

C =
$$\frac{5}{150 \times 0.32 \times 0.95 \times 0.5} = \frac{5}{22.8} = 0.22$$

Any combination of crop sequence, tillage and residue level having a C value of 0.22 or less would meet the erosion goal of 5 ton per acre per year. If you wish to include cover and management practices in your cropping system that have a C value greater than 0.22, you must also include cropping and management practices that are less than 0.22 in successive years. As an example, consider a 4-year conservation plan. You wish to have a corn-soybean rotation. When corn is planted into soybean residue, assume the field is field cultivated leaving 20 percent residue. This practice has a C value of 0.31. When soybeans are planted into corn residue, assume the field is disked several times leaving less than 5 percent residue. This practice has a C value of 0.33. The average C value for these two options is much greater than 0.22. For the second 2 years of the plan you choose to put in alfalfa which has a C value of 0.02. The average C value for the 4-year period is (0.31 + 0.33 + $0.02 + 0.02) \div 4 = 0.17.$

Universal Soil Loss Equation Conservation Practices

A. J. Jones, W. G. Hance and E. C. Dickey¹

Conservation practices such as contour farming, contour strip cropping and terracing can reduce soil loss up to 75 percent depending on topography and field management. Conservation factors (P) are used in the Universal Soil Loss Equation (USLE) to estimate the reduction in soil loss as a result of using these practices. Conservation practices are one of five factors which influence soil erosion caused by water. The other four factors are rainfall, soil erodibility, topography and cover and management practices.

Contour Farming

Contour farming is effective in reducing erosion because each ridge and furrow can intercept water moving down the hill. Intercepted water can then move along the furrows and be discharged into a waterway or other channel without causing substantial soil loss on the field. P values for contour farming range from 0.5 to 0.8 (Table 1). Contour farming is more beneficial on hillsides having less than 12 percent slope. For example, the estimated erosion reduction would be 50 percent on a 6 percent slope having a slope length no greater than 200 feet (P value = 0.5). Contouring a hill with 10 percent slope and slope length no greater than 120 feet would result in about 40 percent erosion reduction (P value = 0.6).

Contour Strip Cropping

Contour strip cropping provides the erosion benefits of contour farming plus the added effect of crop rotation and cover crops. P values for contour strip cropping range from 0.25 to 0.60. P values for two crop rotations are shown in Table 1. These rotations include one or two years of meadow (M), one year of small

10.11. When problems are manufactured into contractures and an optimized of the contracture of the second second restricts are provided by the second second restricts of the second second second restricts are second as a second se

grain (G) and one or two years of row crops (R). Erosion control occurs with contour strip cropping because meadow and small grains provide substantial ground cover in the spring when heaviest rains occur. Because of an additional year of meadow, the RGMM rotation is about 30 percent more effective in controlling erosion than the RRGM rotation for all slopes. It is also apparent that contour strip cropping a 5 percent slope with a RGMM rotation (P value = 0.25) will be twice as effective in reducing erosion as a RRGM rotation on a 15 percent slope (P value = 0.52). Values for other rotations can be obtained from your local SCS office.

Terraces

Terraces reduce erosion by intercepting water which moves downslope between the terraces. Water is collected in the terrace channel and is moved off the field by grassed waterways or underground outlets. P values for terraces range from 0.5 to 1.0 (Table 2). The greatest benefits from terracing a hillside are contour farming and a reduction in slope length. If terraces are considered in the estimation of soil loss, the P value used in the USLE equation should reflect terracing and contour farming practices. To calculate this combined P value multiply the P value for terracing (Table 2) times the P value for contour farming (Table 1).

To determine the P factor for one of these conservation practices, locate your slope gradient or terrace interval in the left hand column of the appropriate table. Then select the column of P values for the desired conservation practice. The value in the table where this row and column intersect is your conservation value P. Remember, terraces change the slope length, thus the LS factor outlined in USLE-Rainfall and Topographic Factors will probably need to be decreased.

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¹Ext. Soil Erosion Control/Conservation Tillage Specialist, Univ. of Nebr., State Resource Conservationist, Soil Conservation Service, Lincoln; Ext. Agric. Engineer-Conservation, Univ. of Nebr., Lincoln, respectively.

Table 2. Conservation practice (P) values for terraces with underground outlets or waterways.

Terrace interval	Underground	Waterw	ade of ³	
(ft)	outlets	0.1-0.3	0.4-0.7	0.8
		P v	alue	19 D
Less than 110	0.5	0.6	0.7	1.0
110 - 140	0.6	0.7	0.8	1.0
140 - 180	0.7	0.8	0.9	1.0
180 - 225	0.8	0.8	0.9	1.0
225 - 300	0.9	0.9	1.0	1.0
300 up	1.0	1.0	1.0	1.0

 $^{3/}$ The average channel grade is calculated from 300 feet or 1/3 of the terrace length closest to the outlet—whichever is less.

vegenition the orosettaing grown, and routing, turges produces and residue on the soll surface influence soil erosion resulting from these processes. Recalling the soll surface rough or construct for regulation of residue results in these C values. For Nebrasia, C values range from 0.02 to 0.59 (Table T):

C values have been developed for several cover and a management combinations. For example, in Table 1, 7 Co-B is for com (CO) india plunted into wybean (B), residue. Tillege is divided but two major grapps based upon preplem tillege operations and subdivided for difforent amounts of mining on the soil surface after plating.

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Table 1. Conservation practice (P) values for contour farming and contour strip cropping.

	Contour	farming	Contour strip cropping ²				
Slope gradient (%)	Max. slope length (ft)	P value	Strip width (ft)	P v RGMM	alue RRGM		
1 - 2	400	0.6	130	0.30	0.45		
3 - 5	300	0.5	100	.25	.38		
6 - 8	200	0.5	100	.25	.38		
9 - 12	120	0.6	80	.30	.45		
13 - 16	100	0.7	80	.35	.52		
17 - 20	100	0.8	60	.40	.60		

^{2/}Strip cropping is for a 4-year rotation of row crop followed by 1 year of small grain and 2 years of meadow (RGMM) or 2 years of row crop followed by 1 year of small grain and 1 year of meadow (RRGM). Meadow includes alfalfa, clover, grass, etc.

Human Front 5 to 50 percent.

No-oil vystears leave the voll vigitate unitatively prine to identiting Residue levels may range from 20 w 70 percent. The antenum officeidue for no-till depende on yield of the provinus crob, symbilize of residue of seavest, graning, and removal of residue fram the sid t Refitted titing and no fill fields which have 10 percent or giver residue on, the soil surface siter planting age called "comes varion tillage."

The C value for a crep requeres, tillage and reaches mathemated combinization can be identified by first vebering the crop sequence of interact from the left hand column of Table 1. -Next, locate the tillage ordina and metocisted parcentage of readble remaining after plants in that not any termented in along the top cost of the table. The value in the table where this row and column materials your C value.

Universal Soil Loss Equation Cover and Management Practices

A.J. Jones, E.C. Dickey, and W.G. Hance¹

The influence of cover and management practices on soil loss are expressed by the C factor. This is one of five factors used in the Universal Soil Loss Equation (USLE). C is an index of the erosion that would occur when a crop is grown using a specific management practice as compared to leaving the land clean-tilled without vegetation. The crop being grown, crop rotation, tillage practices and residue on the soil surface influence soil erosion resulting from these practices. Keeping the soil surface rough or covered by vegetation or residue results in lower C values. For Nebraska, C values range from 0.02 to 0.59 (Table 1).

C values have been developed for several cover and management combinations. For example, in Table 1, Co-B is for corn (Co) being planted into soybean (B) residue. Tillage is divided into two major groups based upon preplant tillage operations and subdivided for different amounts of residue remaining on the soil surface after planting. Clean tillage can be any tillage practice, performed in the fall or spring, which leave little or no residue on the soil surface after planting.

Reduced tillage systems include the use of a disk, chisel, field cultivator, anhydrous applicator, rotary tiller or ridge planter. Residue remaining on the soil surface after planting with reduced tillage systems may range from 5 to 50 percent.

No-till systems leave the soil surface undisturbed prior to planting. Residue levels may range from 20 to 70 percent. The amount of residue for no-till depends on yield of the previous crop, spreading of residue at harvest, grazing, and removal of residue from the field. Reduced tillage and no-till fields which have 30 percent or more residue on the soil surface after planting are called "conservation tillage."

The C value for a crop sequence, tillage and residue management combination can be identified by first selecting the crop sequence of interest from the left hand column of Table 1. Next, locate the tillage option and associated percentage of residue remaining after planting that you are interested in along the top row of the table. The value in the table where this row and column intersect is your C value.

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• Controls here exception provides the resulted benches of controls hereing plus the added offset of any rotation will cover goin. Provides for controls strip propmag mage from 0.05 to 0.06. Product free two mop rotations are shown in Table 1. They result in factors out or two years of mondow (M), one result of strail

¹Ext. Soil Erosion Control/Conservation Tillage Specialist, Univ. of Nebr. Lincoln; Ext. Agric. Engineer-Conservation, Univ. of Nebr., Lincoln; State Resource Conservationist, Soil Conservation Service, Lincoln, respectively.

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Table 1.	Cover and managem	ent (C) value	s for specifi	c combinations of	of tillage.	residue cover	after planting	g and crou	o sequence.
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Tillage	Tillage						-		No I	tillage	and and and	
Residue	<5%(Fall)	< 5% (Spring)	20%	30%	40%	50%	20%	30%	40%	50%	60%	70%
Co-Co ^{2,3}	.34	.30	.17	.16	.15	.12	.14	.13	.11	.10	.08	.07
Co-B	.40	37	.31	_	_		.20	.15	.14	.11	_	-
Co-W	.34	30	.14	.11	.10	.09	.14	.13	.11	.10	.08	.06
Co-0	.34	.30	.15	.12	.11	.10	.14	.13	.11	.10	.08	.06
Co-M	.25	.24	.12	.11	.10	_	_	-	_	_	-	.02
Co-Co-M	.29	.27	.16	.13	.12	.11	.13	.12	.10	.09	.07	.06
Co-FB	.40	.36	.22	.18	.14		IL INCOME	.13	.11		611-1 <u>10</u> 10-10	Sincer.
Co-SB	.40	.36	.23	.18	The fam	- 20	.21	.17		1 - <u>1 -</u> 3 - 1	00000	hosso
B-B	.46	.44	.36	entrolling es		-		_	.27	.22	_	
B-Co	.39	.33	.20	.16	.13	.11	_	_	-	.09	.08	.07
B-W	.30	.28	.18	.16	.12		Part - Call	1 <u>1</u>	de <u>a</u> rti			.03
О-В	.14	.10	.08	a 💶 🖉	S		.08	.07	.06	.05	20.00 20.00	
0-Co	.13	.09	.08	.07	.06	.05		.06	.05	.04	.03	.02
W-B	.19	one tona	.14	n seda	0.1-00			e k ui thi	-	.07	.06	nn a a
W-M	.10	-	-	-	-	-	and the state	-		Series and Series	1.1.1	-
W-W	.20	.20	.10	.09	.08	.07	Carlo and States	_	-		-	.04
W-O	.23	.23	.12	.11	.09	.08	al pauloisi	ng <u>n</u> ad	200 2000		.05	.04
W-Co	.16	.16	.13	.11	.10	.08	1 to the	all p or ac	di mon	.06	.05	187 - 1 12
FL-Co	.59	.45	.25	.18	.14	.11	150050 3	Numero S	10- 20	hautes	apol la te	11000
FL-W	.47	.39	.15	.11	.09	.07	num <u>er</u> a	1010	11-12	00 0001	581157	1010 <u>00</u> 00
FB-Co	.40	.32	.25	.20	.18	.16				300,310	.09	.07
FB-SB	.42	.35	.29	.24	.20		.23	.19	.16	.13	.11	-
SB-FB	.41	.37	.25	.22	.18		.23	.19	.16	.13	.11	140 -01
SB-Co	.35	.33	.22	.17	.14	- 11	ineite m	ocarto vo	E dirth. 3	for Trail	and the B	adit she
M (Est)	1.0 1.1	20, 95	- T	0	3 7		w oninint	105_000	r the rea	of miny	M MIT.	.02

 $^{2/}$ Milo may be substituted for corn; all C values are for wide row plantings.

³⁷Crop abbreviations are as follows: Co = corn; B = soybeans; W = winter wheat; M = meadow (alfalfa, clover, grass, etc.); FB = field beans; SB = sugar beets; FL = mechanical fallow.

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Universal Soil Loss Equation Rainfall and Topographic Factors

A. J. Jones and W. G. Hance¹

Rainfall and topography are two factors which influence soil erosion and are used in the Universal Soil Loss Equation (USLE). When combined with information on soil erodibility (K), the maximum soil loss possible for a soil can be estimated. This information is also necessary for estimating average annual soil loss on a field for specific combinations of cover and management (C) and conservation (P) practices.

RAINFALL FACTOR (R). R indicates the relative erosion potential of an area as it relates to rainfall intensity and duration. This factor has been developed from many years of rainfall information collected at U.S. weather stations around the country. R values for Nebraska range from 50 to 175 (Fig. 1). Southeast Nebraska has the highest R value because of high annual rainfall and intense storms. R decreases to the west as rainfall drops from approximately 30 inches per year in the east to 14 inches per year in the west. To determine the R value for your farm, locate your county in Figure 1. The R value for the region containing your county is applicable to your entire farm.

TOPOGRAPHIC FACTOR (LS). LS indicates the relative erosion potential of a field as affected by slope length and slope gradient. Slope length is the distance from the point where the water begins to flow to the point where 1) sediment may be deposited, 2) run-off forms a gully or enters a terrace channel, or 3) it is concentrated in a grassed waterway or other natural drainageway.² Slope gradient, expressed as a percentage, is the elevation change per 100 feet down the slope.

LS values for combinations of slope length and slope gradient are given in Table 1. To determine LS, locate your slope gradient in the left-hand column of the table. Then locate the slope length along the top row of the table. The number in the table where this row and column intersect is your LS value. Erosion potential associated with a short slope on a gentle hillside is fairly low and is expressed by a small LS value. As a hill becomes steeper or has a longer slope length, the erosion potential increases and is expressed by a larger LS value.

Table 1. Topographic (LS) factors for specific combinations of slope gradient and slope length.

Slope		Slope Length (feet)											
(%)	50	100	150	200	300	400	600						
2	.16	.20	.23	.25	.28	.30	.34						
4	.30	.40	.47	.53	.62	.70	.82						
6	.49	.67	.82	.95	1.17	1.35	1.65						
8	.70	.99	1.21	1.41	1.72	1.98	2.43						
10	.97	1.37	1.68	1.94	2.37	2.74	3.36						
12	1.28	1.80	2.21	2.55	3.13	3.61	4.42						
14	1.62	2.30	2.81	3.25	3.98	4.59	5.62						
16	2.01	2.84	3.48	4.01	4.92	5.68	6.95						
18	2.43	3.43	4.21	4.86	5.95	6.87	8.41						
20	2.88	4.08	5.00	5.77	7.07	8.16	10.0						

¹Ext. Soil Erosion Control/Conservation Tillage Specialist, Univ. Nebr. Lincoln and State Resource Conservationist, Soil Conservation Service, Lincoln, respectively.

²Where terraces are constructed the slope length is the distance from the top of the terrace ridge to the center of the lower terrace channel.



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Universal Soil Loss Equation Soil Erodibility and Soil Loss Tolerance

J.R. Culver and A.J. Jones¹

Soil erodibility is one factor which influences soil erosion and which is used in the Universal Soil Loss Equation (USLE). When combined with information on rainfall (R) and topography (LS), the maximum soil loss possible for a soil can be estimated. This information is also necessary for estimating average annual soil loss on a field for specific combinations of cover and management (C) and conservation (P) practices.

The soil survey for your county or a detailed soil map of your farm can be used to identify soil series and types found on your farm. The soil erodibility factor (K) and tolerance limit for soil loss (T) for major soils in the designated counties are given in Table 1 and in many soil survey reports.

¹State Soil Scientist, Soil Conservation Service, Lincoln, NE; and Ext. Soil Erosion Control/Conservation Tillage Specialist, University of Nebraska, Lincoln, NE, respectively.

TOPOLESRAPHIC FACTOR day. If indicates the televise provide problem is the second structure of a field in attracted by slope tength and slope gradient. Slope tength in the distance from the court where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point where the state begins in flow to the point of a state begins in the state of the state begins of the state begins

SOIL ERODIBILITY (K). K is a relative measure of the rate at which a soil erodes. Different K values are assigned to different soil series and types because of differences in soil texture, organic matter content, structure and soil depth. The K factor ranges from 0.15 to 0.43 for Nebraska soils. Sandy soils which are not very susceptible to erosion from water have small K values. Fine textured clayey and silty soils which are highly erosive have large K values.

SOIL LOSS TOLERANCE (T). T indicates the maximum annual soil loss from a field that can be sustained on a long-term basis without reducing the natural productivity of the soil. If erosion is allowed to occur at a rate greater than T for a long period of time crop production can decline. Nebraska soils have T values ranging from 1 to 5 ton per acre per year.

Values for K and T are presented in Tables 1-8 for the major soils of Nebraska. Each table includes soils found in the designated counties.

[&]quot;Pet, 324 Ereiter Germit/Courterator Titale Spicala, Uni-Netz Lincols with Scientification Content atomic, 194 Courteration Bereite, Lincols, Imperiode.

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 Table 1. Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Banner, Box Butte, Dawes, Kimball, Morrill, Scotts Bluff, Sheridan, and Sioux. T is measured in tons per acre per year.

Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Alice loamy fine sand	.17	5	Haverson silt loam, loam	32	unit is the
Alice fine sandy loam	.20	5	Haverson silty clay loam, clay loam	32	5 10
Alliance silt loam, loam	.32	5	Havre silt loam	32	Sell Ister
Almeria loamy fine sand	.17	5	Hemmingford loam	28	S
Altvan fine sandy loam	.20	4	Hisle loam	37	3
Altvan loam	.28	4	Hoffland fine sandy loam	20	of allegings
Angora very fine sandy loam	.37	5	Hoffland fine sandy loam wet	20	5
Anselmo fine sandy loam	.20	5	Imlay loam	22	2
Arvada loam	.32	5	Inavale fine sand	15	5
Bankard fine sand	.15	5	Inavale loamy fine cand	.15	-
Bankard loamy fine sand, loamy coarse sand	.17	5	Interior silty clay loam	.1/	
Bankard very fine sandy loam	24	5	Incolor sincy clay loan	.54	5
Barney loam	.28	5	Inage loamy sand loamy fine sand	.15	5
Bayard very fine sandy loam	.32	5	Indice loamy fine cond	.17	5
Bayard fine sandy loam	20	5	Janise loam drained	.17	LEI LE IVE
Blanche very fine sandy loam	32	4	Javam loomy fine cond	.43	5
Bolent fine sand	15	5	Jayem loamy unit fine cond	.17	3
Bolent loamy fine sand loamy sand	17	5	Jayem foany very fine sand	.20	2
Bolent fine sandy loam	24	5	Jayem line sandy loam	.20	2
Bridgeport very fine sandy loam	22	5	Kadoka silt loam	.32	4
Bridgeport loam	32	5	Keith loam	.28	5
Bridget very fine sandy loam	.32	5	Keith silt loam	.32	5
Bridget very file sandy foam	.32	5	Keota silt loam	.37	4
Buffington silty day loom	.32	5	Kuma silt loam	.32	5
Buffington silty clay foan	.32	5	Kyle silty clay	.37	5
Buffington silty clay	.32	5	Las fine sandy loam	.24	5
Burton Sitty Clay Ioam	.37	2	Las loam	.32	5
Busher toamy very line sand	.20	2	Las Animas fine sandy loam	.24	5
Busher Very fine sandy loam	.32	5	Las Animas very fine sandy loam	.28	5
Busher fine sandy loam	.20	5	Las Animas loam, silt loam	.32	5
Calamus loamy line sand	.17	5	Lisco loamy fine sand	.15	5
Canyon sandy loams	.24	2	Lisco very fine sandy loam	.37	5
Canyon loam, very fine sandy loam	.32	2	Lohmiller silty clay loam, silty clay	.32	5
Chappell sandy loam	.20	4	Lute fine sandy loam	.24	3
Cheyenne loam	.28	4	Manter fine sandy loam	.20	5
Colby silt loam, loam	.43	5	Marlake very fine sandy loam, fine sandy loam	.20	2
Craft loamy very fine sand	.24	5	McCook fine sandy loam	.20	5
Craft very fine sandy loam	.37	5	McCook very fine sandy loam	.32	5
Creighton very fine sandy loam	.32	5	McCook loam	.32	5
Crowther loam	.28	5	McCook silty clay loam	.32	5
Dailey loamy sand, loamy fine sand	.17	5	McGrew fine sandy loam	.24	4
Dix loamy corse sand	.17	2	McGrew loam	.32	4
Dix Ioam	.20	2	McKelvie loamy fine sand	.17	5
Doger loamy fine sand	.17	5	Minatare loam	.43	3
Dunday loamy fine sand	.17	5	Minnequa silty clay loam	.37	2
Duroc very fine sandy loam	. 32	5	Mitchell fine sandy loam	.24	5
Duroc loam	.32	5	Mitchell very fine sandy loam	.43	5
Dwyer loamy sand, loamy fine sand	.17	5	Mitchell silt loam	.43	5
Eckley gravelly sandy loam	.15	2	Norrest clay loam, loam	.37	4
Els fine sand	.15	5	Oglala very fine sandy loam	.32	5
Els loamy fine sand	.17	5	Oglala loam	.28	5
Elsmere loamy fine sand	.17	5	Orella silty clay loam	.37	2
Epping very fine sandy loam	.43	2	Orella silty clay, clay	.32	2
Epping silt loam	.43	2	Otero loamy fine sand	.17	5
Fluvaquents sand	.15	5	Otero loamy very fine sand	17	5
Gannett loam	.24	5	Otero fine sandy loam	20	5
Gering loam	.32	4	Otero very fine sandy loam loam	37	5
Glenberg fine sandy loam	.24	5	Parshall sandy loam	24	5
Glenberg loamy very fine sand,			Penrose silty clay loam	32	1
loamy fine sand	.17	5	Pierre silty clay	37	4
Glenberg very fine sandy loam	.37	5	Platte loam	28	2
Goshen loam	.28	5	Richfield silt loam loam	32	5
Gothenburg loamy sand	.17	2	Rosebud loam	28	4
Haverson fine sandy loam	.20	5	Rosebud silt loam	32	4

Table 1. Continued

Soil Series and Type	K Factor	T Value		
Samsil clay, cilty clay	.37	2		
Sarben loamy very fine sand	24	5		
Sarben very fine sandy loam	37	5		
Sarben fine sandy loam	24	5		
Satanta fine sandy loam	20	5		
Schamber loam, gravelly san	dy loam 17	2		
Scott silt loam		3		
Simeon sand	.15	5		
Tassel loamy fine sand	.17	2		
Tassel loamy very fine sand	.24	2		
Tassel fine sandy loam	.24	2		
Tripp fine sandy loam	.20	5		
Tripp very fine sandy loam	.32	5		
Tripp silt loam, loam	.32	5		
Tryon fine sandy loam	.20	5		
Ulysses silt loam, loam	.32	5		
Valent fine sand	.15	5		
Valent loamy fine sand	.17	5		
Valentine fine sand	.15	5		
Valentine loamy fine sand	.17	5		
Vebar sandy loam	.28	4		
Vetal loamy very fine sand	.20	5		
Vetal fine sandy loam	.20	5		
Wildhorse sand, fine sand	.15	3		
Wildhorse loamy fine sand	.17	3		
Woodly fine sandy loam	.20	5		
Yockey very fine sandy loam	.37	5		
Yockey silt loam, loam	.37	5		
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 Table 2.
 Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Cherry, Cheyenne, Deuel, Garden, Grant, Hooker, and Thomas. T is measured in tons per acre per year.

Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Alice fine sandy loam	.20	5	Janise loam, silt loam	.43	5
Alliance silt loam	.32	5	Jayem fine sandy loam	.20	5
Almeria loamy fine sand	.17	5 1014	Keith fine sandy loam	.20	5
Almeria fine sandy loam	.24	5	Keith silt loam	.32	5
Altvan loam	.28	4	Keota silt loam	.37	4
Anselmo loamy fine sand	.17	5	Keya loam	.32	5
Anselmo fine sandy loam	.20	5	Kuma loam	.32	5
Bankard loamy fine sand, loamy coarse sand	.17	5	Las fine sandy loam	.24	5
Bayard very fine sandy loam	.20	5	Las loam	.32	5
Bayard loam	.28	5	Las Animas loamy sand	.17	5
Bolent loamy fine sand	.17	5	Las Animas fine sandy loam	.24	5
Bolent fine sandy loam	.24	5	Laurel loam	.32	5
Bridgeport loam	.32	5	Libory loamy fine sand	17	5
Bridget very fine sandy loam	.32	5	Loup fine sand	17	5
Busher loamy very fine sand	20	5	Loup fine sandy loam	20	5
Busher very fine sandy loam	32	5	Loup loam	28	5
Busher fine sandy loam	20	5	Marlake loam fine sandy loam	20	2
Canyon fine sandy loam	24	2	McKelvie loamy fine sand	.20	5
Canyon loam very fine sandy loam	22	2	Meadin loamy sand loam fine sand	.17	2
Cariyon loam, very fine sandy loam	.32	2	Minetere loom	.17	3
Chappell condu loom	.28	3	Mitchell your fine condy loom	.43	3
Chappell Joam	.20	4	Mitchell loss	.43	2
Chappen Ioam	.28	4	Mitchell Ioam	.43	2
Calles alle la sur	.28	4	Nunn siit loam	.32	5
Colby silt loam	.43	5	Ord loam	.28	5
Craft loamy very fine sand	.24	5	Otero fine sandy loam, sandy loam	.20	5
Creighton very fine sandy loam	.32	5	Platte loam	.28	2
Crowther loam	.28	5	Richfield silt loam	.32	5
Dawes loam	.37	4	Ronson fine sandy loam	.20	4
Dix gravelly loam	.20	2	Rosebud fine sandy loam	.20	4
Dix sandy loam, loam	.20	2	Rosebud loam	.28	4
Doger loamy fine sand	.17	5	Sandose loamy fine sand	.17	5
Duda loamy fine sand	.17	4	Sarben loamy fine sand	.17	5
Dunday loamy fine sand	.17	5	Satanta fine sandy loam	.20	5
Duroc silt loam	.32	5	Satanta loam	.28	5
Dwyer loamy sand	.17	5	Scott silt loam	.37	3
Els fine sand	.15	5	Scott silty clay loam	.37	3
Elsmere fine sand	.15	5	Selia fine sand	.15	3
Elsmere loamy fine sand	.17	5	Simeon sand	.15	5
Elsmere fine sandy loam	.20	5	Tassel loamy fine sand	.17	2
Epping loam	.43	2	Tassel loamy very fine sand	.24	2
Gannett sandy loam	.20	5	Tassel fine sandy loam	.24	2
Gannett loam	.24	5	Tripp silt loam	32	5
Glenberg fine sandy loam	.24	5	Tryon loamy fine sand, fine sand	17	5
Goshen fine sandy loam	20	5	Tryon fine sandy loam	20	5
Goshen silt loam	20	5	Lilvsses silt loam	32	5
Gothenburg sandy loam fine sandy loam	24	2	Valent fine cand cand	15	5
Havre loam	28	5	Valent loamy fine sand loamy sand	.13	5
Hennings fine sandy loam	20	5	Valentine fine sand	.17	5
Hoffland fine sandy loam	20	5	Valentine loamy fine sand loamy sand	.15	5
Hoffland loam	.20	5	Vatal fine condy loam	.17	5
inavale fine cand	15	5	Wann fine sendy loam	.20	5
navale loomy fine cond	.15	5	Wann loom	.20	5
havane roamy rine sand	.17	5	wann Ioam	.28	5
page sand, line sand	.15	5	wildhorse loamy fine sand	.17	3
page loamy fine sand	.17	5	Yockey silt loam	.37	5

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 Table 3.
 Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Arthur, Chase, Dundy, Frontier, Hays, Hitchcock, Keith, Lincoln, Logan, McPherson, Perkins, and Red Willow. T is measured in tons per acre per year.

Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Alda fine sandy loam	.20	4	Hersh fine sandy loam	.24	5
Alliance silt loam	.32	5	Hobbs fine sandy loam	.20	5
Altvan loam	.28	4	Hobbs silt loam	.32	5
Anselmo loamy fine sand	.17	5	Holdrege fine sandy loam	.20	5
Anselmo sandy loam, fine sandy loam	.20	5	Holdrege silt loam	.32	5
Ascalon fine sandy loam	.20	5	Hord fine sandy loam	.20	5
Bankard fine sand	.15	5	Hord silt loam	.32	5
Bankard loamy fine sand, loamy sand	.17	5	Humbarger loam	.28	5
Banks fine sand	.15	5	Inavale loamy fine sand	.17	5
Banks loamy fine sand	.17	5	Ipage fine sand	.15	5
Barney silty clay loam	.28	5	Janise loam, drained	.37	5
Bayard loamy fine sand	.17	5	Jayem loamy fine sand	.17	5
Bayard fine sandy loam	.20	5	Jayem loamy very fine sand	.20	5
Bayard loam	.28	5	Jayem fine sandy loam	.20	5
Blanche very fine sandy loam	.32	4 10 1	Keith fine sandy loam	.20	5
Boel loamy fine sand	.17	5	Keith silt loam	.32	5
Bridgeport loam, silt loam	.32	5	Kuma silt loam	.32	c. 5
Bridget silt loam, loam	.32	5	Laird fine sandy loam	.20	5
Bushman very fine sandy loam	.32	5	Las sand	.15	5
Canyon fine sandy loam	.24	2	Las fine sandy loam	.24	5
Canyon loam	.32	2	Las loam	.32	5
Caruso loam	.28	5	Las Animas loamy fine sand	.17	5
Cass fine sandy loam	.20	5	Lawet fine sandy loam	.20	5
Chappell fine sandy loam	.20	4	Lawet loam, silt loam	.28	5
Colby silt loam loam	.43	5	Lex loam	.28	4
Coly silt loam loam	.43	5	Loup loamy fine sand	.17	5
Cozad silt loam	.32	5	Loup fine sandy loam	.20	5
Cozad silty clay loam	.32	5	Mace silt loam	.32	4
Creighton very fine sandy loam	.32	5	Marlake fine sandy loam	.20	2
Dailey loamy sand	.17	5	McCash very fine sandy loam	.32	5
Dix gravelly loam	.20	2	McCook silt loam, loam	.32	5
Doger loamy fine sand	.17	5	Ord fine sandy loam	.20	5
Duda loamy sand	.17	4	Otero loam	.37	5
Dunday loamy fine sand	.17	5	Ovina fine sandy loam	.20	5
Duroc loam silt loam	.32	5	Platte loam	.28	2
Durver loamy fine sand	.17	5	Rauville loam	.32	5
Els fine sand	.15	5	Rosebud loam	.28	4
Els loamy fine sand	.17	5	Sarben loamy fine sand	.17	5
Els loanty fine sand	15	5	Sarben loamy very fine sand	.24	5
Elsmere loamy fine sand	.17	5	Satanta very fine sandy loam	.32	5
Elsmere fine sandy loam	.20	5	Satanta loam	.28	5
Fillmore silt loam	.37	4	Scott silt loam	.37	3
Gannett fine sandy loam sandy loam	.20	5	Scott silty clay loam	.37	3
Gannett loam	.24	5	Silver Creek silt loam	.32	3
Gannett silt loam	28	5	Tassel loamy sand	.17	2
Gibbon silt loom	32	5	Tryon loamy fine sand	.17	5
Cibbon loam	28	5-6V	Illy silt loam	.32	5
Clenberg fine sandy loam	24	5	Ulysses silt loam, loam	.32	5
Glenberg loam	.32	5	Ulysses clay loam	.32	5
Coshen fine sandy loam	20	5	Valent fine sand, sand	.15	5
Coshen silt loam	32	5	Valent loamy sand	.17	5
Gothenburg loamy sand	17	2	Valentine fine sand	.15	5
Uall silt loom	32	Silver Silver	Valentine loamy fine sand	.17	5
Haverson fine sandy loam	20	5	Vehar fine sandy loam	28	4
Haverson loom	32	5	Vetal loamy very fine sand	20	5
Hours fine candy loam	20	5	Vetal fine sandy loam	.20	5
Have loam	28	5	Wann fine sandy loam	.20	5
Havie Ioanny fine send	17	5	Wann loam	.28	5
Haxtun fine sandy loam	20	5	Woodly loamy fine sand	.17	5
Harch loomy fine card	17	5	Woodly fine sandy loam	.20	5
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Table 4. Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Blaine, Boyd, Brown, Custer, Garfield, Holt, Loup, Keya Paha, and Rock. T is measured in tons per acre per year.

Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Albaton silty clay, clay	.28	5	Johnstown fine sandy loam	.20	5
Almeria loamy fine sand	.17	5	Johnstown loam	.28	5
Almeria fine sandy loam	.24	5	Josburg fine sandy loam	.20	5
Anselmo loamy fine sand	.17	5	Josburg loam	.28	5
Anselmo fine sandy loam, very fine sandy loam	.20	5	Kenesaw very fine sandy loam	.32	5
Anselmo loam	.28	5	Keota silt loam	.37	4
Barney fine sandy loam	.20	5	Labu silty clay	.32	4
Barney loam silt loam	.28	5	Lamo silty clay loam	.32	5
Bazile loam silt loam	32	4	Lamo loam	.32	5
Blake silty clay loam	.37	5	Lawet loam silt loam	.28	5
Blendon fine sandy loam	20	5	Leshara silt loam	.32	5
Boel loamy fine sand	.17	5	Les loam	.28	4
Boel fine sandy loam	20	5	Libory loamy fine sand	.17	5 100
Boel silty clay loam	.32	5	Loretto loam	.28	5
Boelus fine sand	.15	5	Loup fine sandy loam	.20	5
Boelus loamy fine sand, loamy sand	.17	5	Loup loam	.28	5
Bolent loamy fine sand loamy sand	17	5	Lute fine sandy loam	24	3
Bolent fine sandy loam	24	5	Lute loam	32	3000
Bord silty clay	37	4	Lute Ioan	37	4
Bristow silty clay	43	2	Monter loamy fine sand	17	5
Bristow sity day	28	4	Manter fine sandy loam	20	5
Brocksburg fine sandy loam	20	4	Mariaville loam	37	2
Brocksburg line sandy loan	.20	4	Mariaville silt loam	.37	2
Brunswick fine sendy loom	.17	4	Marlavine sitt toam	.37	2
Gelenus learny cond learny fine cond	17	5	Mariake loany line sand	.17	2
Catamus toamy sand, toamy tine sand	.17	5	Marklake line sandy loan	.20	5
Cass fine sandy loam	.20	5	McKelvie fine sand	.15	5
Cass loam	.28	5	McKelvie loamy fine sand	.17	2
Coly sitt loam	.43	5	Meadin loamy sand	.17	3
Cozad silt loam	.32	5	Meadin sandy loam, fine sandy loam,	20	2
Crotton silt loam	.43	5	gravelly sandy loam	.20	3
Duda loamy fine sand	.17	4	Meadin Ioam	.28	3
Dunday loamy fine sand, loamy sand	.17	5	Munjor fine sandy loam	.24	2
Dunn loamy sand, loamy fine sand	.17	5	Nimbro silt loam	.28	2
Els fine sand	.15	5	Nora silt loam	.32	2
Els loamy fine sand, loamy sand	.17	2	O'Neill loamy fine sand, loamy sand	.17	4
Elsmere loamy fine sand	.17	5	O'Neill fine sandy loam, sandy loam	.20	4
Elsmere fine sandy loam	.20	5	O'Neill loam	.28	4
Eltree silt loam	.32	5	Onawa silty clay	.32	2
Fillmore silt loam	.37	4	Onita silt loam	.28	5
Gannett fine sandy loam	.20	5	Ord fine sandy loam	.20	2
Gannett loam	.24	5	Ord very fine sandy loam	.32	2
Gates very fine sandy loam	.37	2	Ord loam	.28	2
Gates silt loam	.37	5	Ovina loam	.28	5
Gibbon silt loam	.32	5	Paka fine sandy loam	.20	5
Graybert very fine sandy loam	.32	5	Paka loam	.28	5
Grigston silt loam	.32	5	Pivot loamy fine sand, loamy sand	.17	4
Hall silt loam	.32	5	Promise silty clay	.37	5
Haynie silt loam	.37	5	Ree loam	.28	5
Hersh loamy fine sand	.17	5	Ree silt loam	.32	5
Hersh fine sandy loam	.24	2	Reliance silt loam	.32	5
Hobbs silt loam	.32	5	Reliance silty clay loam	.32	5
Holdrege silt loam	.32	5	Ronson fine sandy loam	.20	4
Holdrege silty clay loam	.32	5	Rusco silty clay loam	.32	5
Holt fine sandy loam	.20	4	Sandose loamy fine sand	.17	5
Hord fine sandy loam	.20	5	Sansarc silty clay	.37	2
Hord silt loam	.32	5	Schamber gravelly sandy loam	.17	2
Inavale fine sand, sand	.15	5	Scott silt loam	.37	3
Inavale loamy fine sand	.17	5	Scott silty clay loam	.37	3
Inavale fine sandy loam	.24	5	Selia loamy fine sand	.17	3
Ipage sand, fine sand	.15	5	Simeon sand, fine sand	.15	5
Ipage loamy sand, loamy fine sand	.17	5	Simeon loamy sand	.17	5
Jansen fine sandy loam	.20	4	Simeon sandy loam	.24	5
Jansen loam	.28	4	Tassel loamy sand	.17	2
			Tassel loamy fine sand	.17	2

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Table 4. Continued

Soil Series and Type	K Factor	T Valu
Tassel fine sandy loam	.24	2
Trent silt loam	.28	5
Tryon loamy fine sand, loamy sand,		
fine sand	.17	5
Tuthill fine sandy loam	.20	4
Uly silt loam	.32	5
Valentine fine sand	.15	5
Valentine loamy fine sand, loamy sand	.17	5
Verdel silty clay loam	.32	5
Verdel silty clay	.32	5
Vetal fine sandy loam	.20	5
Vetal loam	.28	5
Wann loam	.28	5
Wewela loamy fine sand	.17	4
Wewela fine sandy loam	.20	4
Wewela loam	.28	4
Whitelake loamy fine sand	.17	3
Woodly loamy fine sand	.17	5

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Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Albaton silty clay	.28	5	Hersh fine sandy loam	.24	5
Alcester silty loam	.28	5	Hobbs silt loam	.32	5
Alda fine sandy loam	.20	4	Holder silt loam	.32	5
Alda loam	.28	4	Holder silty clay loam	.32	5
Almeria loamy fine sand	.17	5	Holdrege silt loam	.32	5
Anselmo fine sandy loam, very fine			Holdrege silty clay loam	.32	5
sandy loam	.20	5	Hord fine sandy loam	.20	5
Anselmo loam	.28	5	Hord silt loam	.32	5
Aowa silt loam	.32	5	Hord silty clay loam	.32	5
Barney loam	.28	5	Inavale fine sand	.15	5
Bazile loamy fine sand, fine sand	.17	4	Inavale loamy sand, loamy fine sand	.17	5
Bazile loam	.32	4	Inavale fine sandy loam, loam	.24	5
Belfore silty clay loam	.32	5	Ipage fine sand	.15	5
Betts clay loam	.28	5	Ipage loamy sand, loamy fine sand	.17	5
Blendon fine sandy loam	.20	5	Kenesaw fine sandy loam	.20	5
Blendon loam	.28	5	Kenesaw very fine sandy loam	.32	5
Blyburg silty clay loam	.32	5	Kenesaw silt loam	.32	5
Boel loamy fine sand	.17	5	Kezen silt loam	.32	5
Boel fine sandy loam	.20	5	Labu silty clay	32	4
Boel loam	.28	5	Lamo silt loam	.32	5
Boelus fine sand	.15	5	Lamoure silt loam	.28	5
Boelus loamy fine sand, loamy sand	.17	5	Lawet loam, silt loam	28	5
Bristow silty clay	.43	2	Leshara fine sandy loam	20	5
Brunswick fine sandy loam	.24	4	Leshara silt loam	32	5
Butler silt loam	.37	4	Lex loam silt loam	28	4
Campus loam	.28	4	Libory fine sand	15	5
Canvon loam	.32	2	Libory loamy fine sand	.15	5
Cass fine sandy loam	.20	5	Longford loam	.17	5
Cass loam	28	5	Loretto fine sandy loam sandy loam	.20	5
Colby silt loam	43	5	Loretto loam	.20	5
Colo silt loam	28	5	Loup fine sandy loam	.20	5
Coly silt loam	43	5	Loup loam	.20	5
Cozad silt loam	.32	5	Loup toun	.20	A
Crofton silt loam	43	5	Mariaville loam	.37	2
Darr fine sandy loam	20	4	Marlake loamy fine cond	.57	2
Darr silt loam	28	4	Mariake loam	.17	2
Detroit silt loam	37	5	Macook and overwash	.37	5
Doger fine sand	.57	5	McCook fine sandy loam	.15	5
Doger loamy fine sand	17	5	McCook silt loam	.20	5
Dunday loamy fine sand	.17	5	Meedin loamy send	.32	2
Els loamy fine sand loamy sand	.17	5	Meadin sandy loam	.17	3
Elsmere fine sand	.17	5	Moody silty day loom	.20	3
Elsmere loamy fine sand	.15	5	Munice loomu fine cond	.32	2
Elsmere fine sandy loam	.17	5	Munjor loany line sand	.17	2
Elsinere file sandy foam	.20	5	Munjor fine sandy loam	.24	5
Exline fine sandy loam	.32	2	Nimbro silt loam	.28	5
Exline silt loam	.20	3	Nora silte dans land	.32	5
Fillmore silt loam	.32	3	Nora sitty clay loam	.32	5
Fillmore silty clay loam	.37	4	Nuckons sht loam	.32	5
Tuvaquente sand	.57	4	O'Neill line sandy loam, sandy loam	.20	4
Pates years fine sondy loom	.15	5	O'Neill Ioam	.28	4
Carries silt loom	.37	5	Onawa silty clay	.32	5
Capru siltu alau laam	.43	2	Ord fine sandy loam	.20	5
Zibbon silt loom	.32	5	Ord loam	.28	5
Sibbon shi loan	.32	5	Ortello loamy fine sand	.17	5
Jobon Ioam	.28	5	Ortello fine sandy loam	.20	5
Josper Tine sandy loam	.20	5	Ortello loam	.28	5
Josper Ioam	.28	5	Orwet loam	.28	5
Joinenburg fine sandy loam	.24	2	Ovina loamy fine sand	.17	5
Joinenburg loamy sand	.17	2	Ovina fine sandy loam	.20	5
Jothenburg loam	.32	2	Paka loamy fine sand	.17	5
brable silt loam	.32	4	Paka loam	.28	5
rigston silt loam	.32	5	Percival silty clay	.28	4
Albeen one louin					
Iall silt loam	.32	5	Platte loam	.28	2

Table 5.	Soil erodibility (K)	values a	and soil lo	oss tolera	nce (]	() values	for major	r soils ap	plicable	to the	following	counties:	Antelop	be, Buff	falo,
	Dawson, Franklin,	Furnas,	Greeley,	Gosper,	Hall,	Harlan,	Howard,	Kearney	, Knox,	Phelps	, Sherman	, Wheeler	, and	Valley.	T is
	measured in tons p	er acre p	er year.										100	5 miles 194	

Table 5. Continued

Parses, Freddin Protect Green Met, Roles Met, Roles, Howen, Deniel 1997 and Constant, March

Soil Series and Type	K Factor	T Value	
Ronson fine sandy loam	.20	4	
Rusco silt loam	.32	5	
Saltine silt loam	.32	5	
Sansarc silty clay	.37	2	
Sarpy fine sand	.15	5	
Sarpy loamy fine sand	.17	5	
Scott silt loam	.37	3	
Scott silty clay loam	.37	3	
Selia loamy fine sand	.17	3	
Shell silt loam	.32	5	
Silver Creek silt loam	.32	3	
Silver Creek silty clay loam	.32	3	
Simeon sand	.15	5	
Simeon loamy sand	.17	5	
Simeon sandy loam	.24	5	
Solomon silty clay	.28	5	
Thurman sand, fine sands	.15	2	
Thurman loamy fine sand	.17	5	
Thurman fine sandy loam	.20	3	
Trent silt loam	.28	5	
Tryon loamy fine sand	.17	5	
Tryon loam	.28	5	
Uly silt loam	.32	5	
Valentine fine sand	.15	5	
Valentine loamy fine sand, loamy sand	.17	5	
Verdel silty clay	.32	5	
Volin silt loam	.32	5	
Wann fine sandy loam	.20	5	
Wann Ioam	.20	5	
Wann silt loam	20	4	
Wewels loom	28	4	
Wood Diver fine sandy loam	28	3	
Wood River fille saildy foam	37	3	
wood River site toain		etter doubt 1	
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 Table 6.
 Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Adams, Butler, Clay, Fillmore, Hamilton, Lancaster, Nuckolls, Polk, Saline, Saunders, Seward, Thayer, Webster, and York. T is measured in tons per acre per year.

Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Adair clay loam	.37	4	Longford silty clay loam	.32	5
Albaton silt loam	.28	5	Luton silt loam, overwash	.28	5
Albaton silty clay	.28	5	Luton silty clay loam	.37	5
Alda fine sandy loam	.20	4	Luton silty clay	.28	5
Alda loam	.28	4	Marshall silty clay loam	.32	5
Anselmo fine sandy loam	.20	5	Massie silt loam, silty clay loam	.37	3
Anselmo loam	.28	5	Mayberry silty clay loam	.37	4
Barney loam	.28	5	McCook fine sandy loam	.20	5
Blendon fine sandy loam	.20	5	McCook silt loam	.32	5
Boel fine sandy loam	.20	5	Meadin loamy sand	.17	3
Boel loam	.28	5	Meadin sandy loam	.20	3
Brocksburg sandy loam	.20	4	Meadin loam	.28	3
Burchard clay loam, loam	.28	5	Monona silt loam	.32	5
Butler silt loam	.37	4	Morrill loam, clay loam	.28	5
Butler silty clay loam	.37	4	Muir silt loam	.32	5
Carr fine sandy loam	.24	5	Muir silty clay loam	32	5
Cass fine sandy loam	.20	5	Munior loamy fine sand	17	5
Cass very fine sandy loam	.32	5	Munior fine sandy loam	.17	5
Cass loam	.28	5	Nodaway silt loam silty clay loam	.24	5
Colo silty clay loam	.28	5	O'Neill fine sandy loam	.37	1
Coly silt loam	43	5	Olbut silt loam	.20	4
Cozad silt loam	32	5	Onawa silty clay	.37	4
Crete silt loam	37	4	Ortallo fine condu loom	.32	3
Crete silty clay loam	37	4	Ortello lacer	.20	2
Crofton silt loam	.57	5	Orina loamu fina cond	.28	2
Darr fine sandy loam	.43	3	Ovina loamy fine sand	.17	5
Detroit silt loam	.20	4	Pawnee loam, clay loam	.37	4
Dickinson fine sandy loam	.37	3	Pawnee clay	.37	3
Eudora silt loam	.20	4	Percival silty clay	.28	4
Fillmore silt loam	.32	3	Platte fine sandy loam	.20	2
Fillmore silty day loom	.37	4	Platte loam	.28	2
Coord ciltu loom	.37	4	Ponca silt loam	.32	5
George silty close loom	.32	5	Ponca silty clay loam	.32	5
Cibbon silt loom silty day loom	.32	5	Rauville Ioam	.32	5
Cibbon loam, sity clay loam	.32	5	Roxbury silt loam	.32	5
Gibbon loamy sand	.17	5	Rusco silt loam	.32	5
Gothenburg sandy loam	.24	2	Salmo silt loam	.28	5
Grigston silt loam	.32	5	Salmo silty clay loam	.28	5
Hall slit loam	.32	5	Saltine silt loam	.32	5
Hastings silt loam	.32	5	Sarpy fine sand	.15	5
Hastings silty clay loam	.32	5	Sarpy loamy fine sand	.17	5
Haynie silt loam	.37	5	Scott silt loam	.37	3
Hedville sandy loam	.20	2	Scott silty clay loam	.37	3
Hersh fine sandy loam	.24	5	Sharpsburg silty clay loam	.32	5
Hobbs silt loam	.32	5	Shelby clay loam	.28	5
Holder silt loam	.32	5 00 000	Silver Creek silt loam	.32	3
Holder silty clay loam	.32	5	Simeon loamy sand	.17	5
Holdrege silt loam	.32	5	Sogn silty clay loam	.32	1
Hord silt loam	.32	5	Steinauer clay loam, loam	.32	5
Humbarger silt loam	.32	5	Thurman loamy fine sand	.17	5
Ida silt loam	.43	5	Thurman fine sandy loam	.20	5
Inavale loamy fine sand, loamy fine sand	.17	5	Uly silt loam	.32	5
Inavale fine sandy loam	.24	5	Valentine loamy fine sand	.17	5
Jansen sandy clay loam	.28	4	Volin silt loam	.32	5
Judson fine sandy loam	.20	5	Wabash silt loam	.28	5
Judson silt loam	.28	5	Wabash silty clay	.28	5
Kenesaw silt loam	.32	5	Wakeen silty loam, silty clay loam	.32	4
Kennebec silt loam	.32	5	Wann fine sandy loam	.20	5
Kezen silt loam	.32	5	Wann loam	.28	5
Kipp silty clay loam	.32	2	Wood River silt loam	37	3
Kipson silt loam	.32	2	Wymore silty clay loam	37	4
amo silty clay loam	.32	5	Wymore silty clay	37	4
amoure silty clay loam ^{2/}	.28	5	Zoe silty clay loam	.57	-
ancaster loam	.28	4	Zook silt loam	.32	5
eshara silt loam	.32	5	Zook silty clay loam	.40	5
ex silt loam	.28	4	_son only only toall	.20	5

Table 7. Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Boone, Burt, Cedar, Colfax, Cuming, Dakota, Dixon, Dodge, Douglas, Nance, Pierce, Platte, Madison, Merrick, Sarpy, Stanton, Thurston, Washington, and Wayne. T is measured in tons per acre per year.

Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Albaton silt loam, silty clay loam	.28	5	Gibbon loam	.28	5
Albaton silty clay, clay	.28	5	Gothenburg loamy sand	.17	2
Alcester silt loam	.28	5 0 11	Grable very fine sandy loam	.32	4
Alcester silty clay loam	.28	5 011	Grable silt loam	.32	4
Alda fine sandy loam, sandy loam	.20	De El 4trint M	Grigston silt loam	.32	5
Alda loam	.28	4	Hadar loamy fine sand	.17	5
Anselmo fine sandy loam	.20	5	Hall silt loam	.32	ol o 5 min
Aowa silt loam	.32	5	Haynie silt loam	.37	5
Baltic silty clay loam	.37	5	Hobbs silt loam	.32	5
Baltic silty clay	.37	5	Holder silt loam	.32	5
Barney loam	.28	5	Holly Springs silty clay loam	.28	5
Bazile loamy fine sand	.17	4	Hord fine sandy loam	.20	5
Bazile loam	.32	ife e4 now	Hord very fine sandy loam	.32	5
Bazile silty clay loam	.32	4	Hord silt loam	.32	51011
Belfore silt loam	.32	5 115	Inavale loamy fine sand, loamy fine sand	.17	5
Belfore silty clay loam	.32	5 1015	Inavale fine sandy loam	.24	5
Betts loam clay loam	.28	5	Ipage loamy sand, loamy fine sand	.17	5
Blake silty clay loam	37	5 5	Janude fine sandy loam, sandy loam	.20	5
Blencoe silty clay silty clay loam	28	5	Janude loam	.28	5
Blendon fine sandy loam sandy loam	20	pail Shinto	Judson silt loam	.28	5
Blendon loam	28	nt it's midto	Judson silty clay loam	.28	5
Blyburg silt loam	32	cut salenta	Kenesaw silt loam	.32	5
Blyburg silty day loom	32	stars)	Kennebec silt loam	.32	5
Blyburg silty clay loan	.52	Siling S	Kezan silt loam	.32	5 -
Blyburg silty clay, overwasi	.20	5	Lamo silt loam	.32	5
Boel loamy line sand	.17	5	Lamo silty clay loam	.32	5
Boel fine sandy loam	.20	5	Lamo clay loam	.28	5
Boel loam	.28	5	Lamoure silt loam	.28	5
Boelus loamy fine sand	.17	3	Lamoure silty clay loam	.28	5
Boone loamy fine sand	.17	4	Lawet fine sandy loam	.20	5
Boyd silty clay	.37	4	Lawet loam silt loam silty clay loam	.28	5
Brocksburg loam	.28	4	Leisy fine sandy loam	.20	5
Burchard clay loam, silt loam	.28	5	Leisy loam	28	5
Butler silt loam	.37	4	Leshara fine sandy loam	20	5
Butler silty clay loam	.37	4 0xe	Leshara filt loam	32	5
Calco silt loam, silty clay loam	.28	5	Leshara shu loam	.52	4
Carr fine sandy loam	.24	of 115 on the	Lex loam, clay loam	.20	5
Caruso loam	.28	5	Libory loamy line sand	.17	1
Cass fine sandy loam	.20	5	Lockton loam	.20	5
Cass loam, silt loam	.28	5 5 5	Longford loam	.20	5
Clamo silty clay	.28	5	Loretto fine sandy loam	.20	5
Clarno loam	.28	tol 5 hose	Loretto loam	.28	5
Colo fine sandy loam	.20	5	Loup loamy fine sand, loamy sand, fine sand	.17	5
Colo silt loam	.28	5 5	Loup fine sandy loam	.20	2
Colo silty clay loam	.28	5	Loup loam, silt loam	.28	5
Crofton silt loam	.43	5	Luton silt loam, overwash	.28	5
Dudley silt loam	.43	Sines E found	Luton silty clay loam	.37	5
Els loamy fine sand	.17	5	Luton silty clay, clay	.28	5 61
Elsmere fine sand	.15	5	Marlake loamy sand	.17	2
Elsmere loamy fine sand	.17	5	Marklake loam	.20	2
Elsmere fine sandy loam	.20	5	Marshall silty clay loam	.32	5
Eltree silt loam	.32	miels arvill	Maskell loam	.28	5
Exline silt loam	.32	and 3 heats?	McPaul silt loam	.37	5
Fillmore silt loam	.37	aul 4 alla	Meadin loamy fine sand	.17	3
Fonner sandy loam	.20	4	Meadin sandy loam	.20	3
Forney silt loam overwash	37	V10-5-000	Merrick loam	.28	5
Forney silty clay	.28	rife Soutable	Modale silt loam	.37	5
Gannett fine sandy loam	20	TENES marks	Monona silt loam	.32	5
Gaving silt loam	43	2	Moody fine sandy loam	.20	5
Conville silt loam	.45	3 10000	Moody silt loam	.32	5
Gauville sitty along loam	.37	3	Moody silty clay loam	.32	5
Gayvine sity clay loam	.37	and some of	Muir silty clay loam	.32	1 T 5 00
Geary silty clay loam	.32	5	Napa silt loam	.28	3
Cibbon sitty clay loam	.32	5	Napier silt loam	.32	5
Globon loamy sand	.1/	3			A still manual

Soil Series and Type	K Factor	T Value			
Newman loamy fine sand	.17	5			
Nimbro silt loam	.28	5			
Nora silt loam	.32	5			
Nora silty clay loam	.32	5			
Novina sandy loam, fine sandy loam	.20	5			
Nuckolls silty clay loam	.32	5			
O'Neill fine sandy loam	.20	4			
O'Neill loam	.28	4			
Omadi silt loam	.32	5			
Onawa silty clay, clay	.32	5			
Ord fine sandy loam	20	5			
Ord loam	28	5			
Ortello fine sandy loam, sandy loam	20	5			
Ortello loam	28	5			
Orwet loam	28	5			
Ovina loamy fine sand	17	5			
Ovina fine sandy loam	20	5			
Ovina loam	.20	5			
Owego silty clay	.20	5			
Paka sandy loam	.32	5			
Paka sandy day loam	.20	5			
Paraival silty alow	.20	2			
Plotte loom	.28	4			
Platte Ioani	.28	2			
Radyine Ioam	.32	200 P 100			
Redstoe sht loam	.32	4			
Rokeby silt loam	.32	to the sta			
Rusco silt loam	.32	3			most white solution
Salix silt loam	.28	5 dav/			mans the addedd
Salix silty clay loam	.28	5			
Saltine silt loam	.32	5			
Sansarc silty clay	.37	2			
Sarpy fine sand	.15	5			
Sarpy loamy fine sand	.17	5			tins in white
Sarpy fine sandy loam	.24	5			
Sarpy loam	.28	5		37.	mani vice other entities (
Sarpy silty clay overwash	.28	5			
Sharpsburg silty clay loam	.32	5			
Shell silt loam, loam	.32	5			
Shell silty clay loam	.32	5			
Simeon loamy sand	.17	5			
Simeon sandy loam	.24	5			
Solomon silty clay	.28	5	8		
Steinauer clay loam, loam	.32	5			
Talmo sandy loam	.20	2			
Thurman sand, fine sand	.15	5			
Thurman loamy fine sand, loamy sand	.17	5			
Thurman fine sandy loam	.20	5			

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Trent silty clay loam

Valentine loamy fine sand

Waubonsie very fine sandy loam

Wann fine sandy loam

Valentine fine sand

Volin silt loam

Wann silt loam

Zook silt loam

Zook silty clay

Woodbury silty clay

Zook silty clay loam

Wann loam

Table 8.	Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Cass, Gage, Jefferson,
	Johnson, Nemaha, Otoe, Pawnee, and Richardson. T is measured in tons per acre per year.

Soil Series and Type	K Factor	T Value	Soil Series and Type	K Factor	T Value
Ackmore silt loam	.37	5	Lancaster loam	.28	4
Adair clay loam	.37	4	Lanham clay loam	.37	3
Albaton silty clay	.28	5	Malcolm silt loam	.32	5
Benfield silty clay loam	.37	3	Marshall silty clay loam	.32	5
Blencoe silty clay	.28	5	Mayberry silty clay loam, clay	loam .37	4
Burchard clay loam	.28	5	Mayberry clay	.37	3
Butler silt loam	.37	4	Meadin loam	.28	3
Butler silty clay loam	.37	4	Monona silt loam	.32	5
Case loom	.28	5	Morrill loam, clay loam	.28	5
Calo silt loam	.28	5	Moville silt loam	.32	5
Colo silty clay loam	.28	5	Muir silty loam	.32	5
Crete silt loam	.37	4	Nishna silty clay	.37	5
Crete silty clay loam	.37	4	Nodaway silt loam	.37	5
Diskinson fine sandy loam	20	4	Onawa silt loam	.32	5
Dew silt loom	43	5	Onawa silty clay	.32	5
Edelee silty elev loom	37	3	Pawnee loam, clay loam	.37	4
Edalgo silty clay loan	32	3	Pawnee clay	.37	3
Exline silt loam	37	4	Percival silty clay	.28	4
Filimore sitt loam	37	5	Ponca silt loam	.32	5
Geary silty clay loam	.32	1	Pokeby silty clay loam	.32	4
Grable very fine sandy loam	.32	4	Sarny loamy fine sand	.17	5
Gymer silty clay loam	.32	5	Sharpshurg silty clay loam	.32	5
Hastings silt loam	.32	5	Shalby day loam	.28	5
Hastings silty clay loam	.32	5	Sherby clay loam	32	The set to
Haynie silt loam	.37	5	Sogn sitty clay loam	32	5
Haynie silty clay, overwash	.28	5	Steinauer clay loan	17	5
Hedville stony loam	.24	2	Weberh eiter eler loom	28	5
Hobbs silt loam	.32	2	wabash shty clay loan	28	5
Ida silt loam	.43	2	Wabash silty clay	.20	4
Jansen loam	.28	4	wymore sitty clay loan	37	4
Judson fine sandy loam	.20	2	wymore sitty clay	32	5
Judson silt loam	.28	5	Zoe sitty clay toam	28	5
Kennebec silt loam	.32	5	Zook silt loam	28	5
Kipson silt loam, silty clay loam	.32	2	Zook sitty clay loam	28	5
Labette silty clay loam	.37	3	ZOOK silty clay	.20	
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