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

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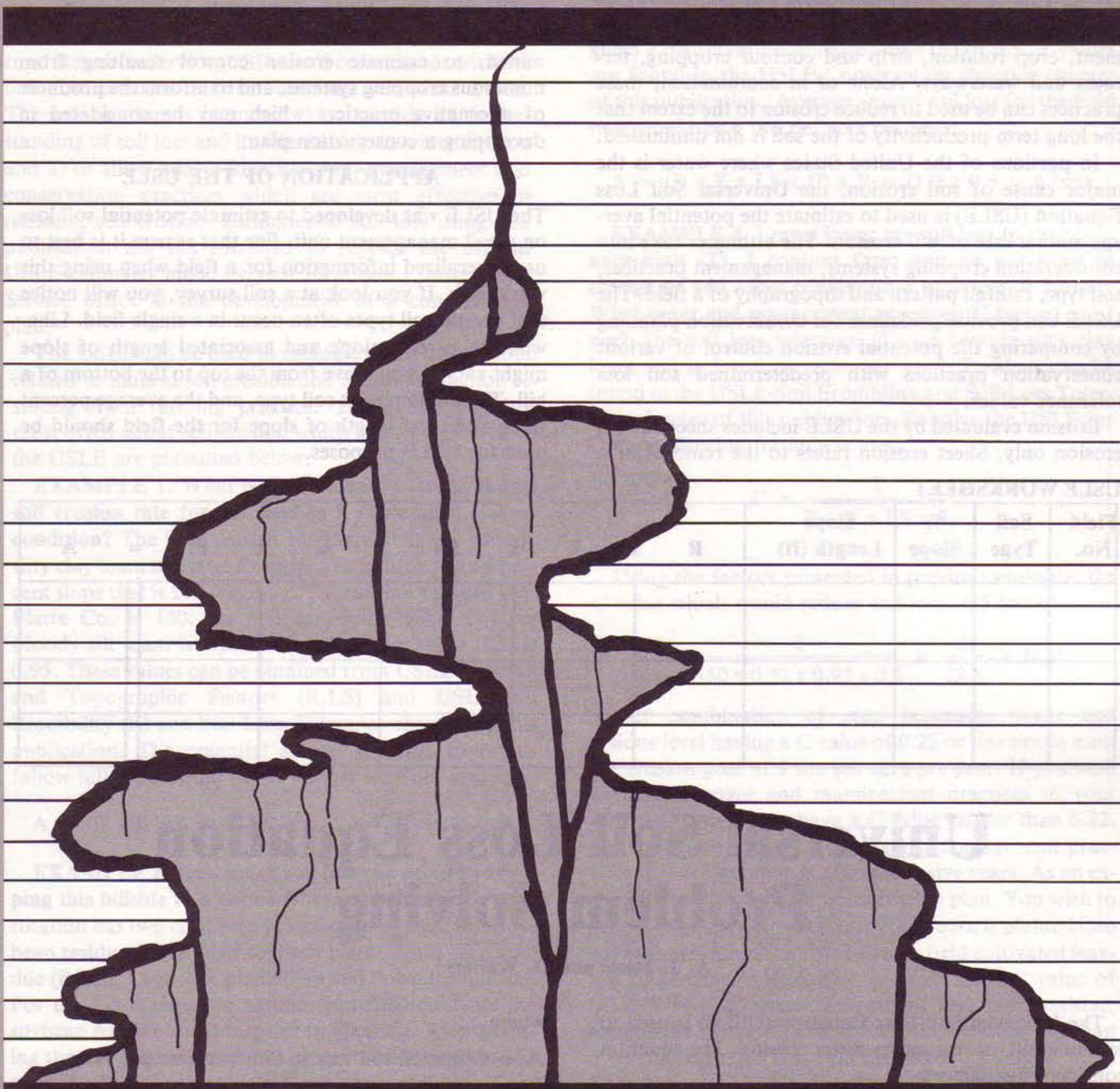

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INTRODUCTION

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 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.

USLE WORKSHEET

Field No.	Soil Type	% Slope	Slope Length (ft)	R	x K	x LS	x C	x P	= A

Universal Soil Loss Equation Problem Solving

A. J. Jones and D. Walters[1]

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

$$A = R \times K \times LS \times C \times P$$

where

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

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

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) ÷ 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) ÷ 4 = 0.17.

Universal Soil Loss Equation Conservation Practices

A. J. Jones, W. G. Hance and E. C. Dickey[1]

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 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.

[1]Ext. 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 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 value RGMM*	*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.

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

Terrace interval (ft)	*Underground outlets*	*Waterways with percent grade of*[3] *0.1-0.3*	*0.4-0.7*	*0.8*
	P value			
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.

Universal Soil Loss Equation Cover and Management Practices

A.J. Jones, E.C. Dickey, and W.G. Hance[1]

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.

[1]Ext. 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.

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.

Table 1. Cover and management (C) values for specific combinations of tillage, residue cover after planting and crop sequence.

Tillage	*Tillage*						*No tillage*					
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-O	.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	—	—	.13	.11	—	—	—
Co-SB	.40	.36	.23	.18	—	—	.21	.17	—	—	—	—
B-B	.46	.44	.36	—	—	—	—	—	.27	.22	—	—
B-Co	.39	.33	.20	.16	.13	.11	—	—	—	.09	.08	.07
B-W	.30	.28	.18	.16	.12	—	—	—	—	—	—	.03
O-B	.14	.10	.08	—	—	—	.08	.07	.06	.05	—	—
O-Co	.13	.09	.08	.07	.06	.05	—	.06	.05	.04	.03	.02
W-B	.19	—	.14	—	—	—	—	—	—	.07	.06	—
W-M	.10	—	—	—	—	—	—	—	—	—	—	—
W-W	.20	.20	.10	.09	.08	.07	—	—	—	—	—	.04
W-O	.23	.23	.12	.11	.09	.08	—	—	—	—	.05	.04
W-Co	.16	.16	.13	.11	.10	.08	—	—	—	.06	.05	—
FL-Co	.59	.45	.25	.18	.14	.11	—	—	—	—	—	—
FL-W	.47	.39	.15	.11	.09	.07	—	—	—	—	—	—
FB-Co	.40	.32	.25	.20	.18	.16	—	—	—	—	.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	—
SB-Co	.35	.33	.22	.17	.14	—	—	—	—	—	—	—
M (Est.)	—	—	—	—	—	—	—	—	—	—	—	.02

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

3/ Crop 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.

Universal Soil Loss Equation Rainfall and Topographic Factors

A. J. Jones and W. G. Hance[1]

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 gradient (%)	*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

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

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

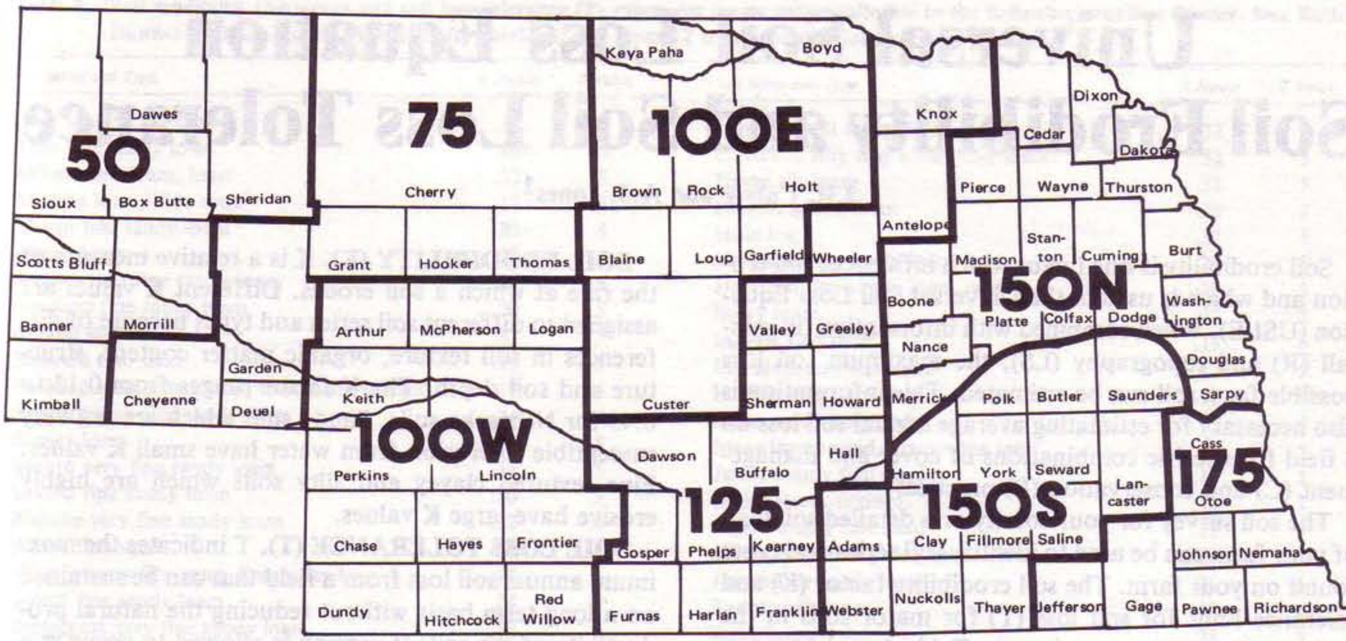

Fig. 1. Rainfall (R) factors for Nebraska.

Universal Soil Loss Equation Soil Erodibility and Soil Loss Tolerance

J.R. Culver and A.J. Jones[1]

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.

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

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.

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*
Alice loamy fine sand	.17	5
Alice fine sandy loam	.20	5
Alliance silt loam, loam	.32	5
Almeria loamy fine sand	.17	5
Altvan fine sandy loam	.20	4
Altvan loam	.28	4
Angora very fine sandy loam	.37	5
Anselmo fine sandy loam	.20	5
Arvada loam	.32	5
Bankard fine sand	.15	5
Bankard loamy fine sand, loamy coarse sand	.17	5
Bankard very fine sandy loam	.24	5
Barney loam	.28	5
Bayard very fine sandy loam	.32	5
Bayard fine sandy loam	.20	5
Blanche very fine sandy loam	.32	4
Bolent fine sand	.15	5
Bolent loamy fine sand, loamy sand	.17	5
Bolent fine sandy loam	.24	5
Bridgeport very fine sandy loam	.32	5
Bridgeport loam	.32	5
Bridget very fine sandy loam	.32	5
Bridget silt loam, loam	.32	5
Buffington silty clay loam	.32	5
Buffington silty clay	.32	5
Bufton silty clay loam	.37	5
Busher loamy very fine sand	.20	5
Busher very fine sandy loam	.32	5
Busher fine sandy loam	.20	5
Calamus loamy fine sand	.17	5
Canyon sandy loams	.24	2
Canyon loam, very fine sandy loam	.32	2
Chappell sandy loam	.20	4
Cheyenne loam	.28	4
Colby silt loam, loam	.43	5
Craft loamy very fine sand	.24	5
Craft very fine sandy loam	.37	5
Creighton very fine sandy loam	.32	5
Crowther loam	.28	5
Dailey loamy sand, loamy fine sand	.17	5
Dix loamy corse sand	.17	2
Dix loam	.20	2
Doger loamy fine sand	.17	5
Dunday loamy fine sand	.17	5
Duroc very fine sandy loam	. 32	5
Duroc loam	.32	5
Dwyer loamy sand, loamy fine sand	.17	5
Eckley gravelly sandy loam	.15	2
Els fine sand	.15	5
Els loamy fine sand	.17	5
Elsmere loamy fine sand	.17	5
Epping very fine sandy loam	.43	2
Epping silt loam	.43	2
Fluvaquents sand	.15	5
Gannett loam	.24	5
Gering loam	.32	4
Glenberg fine sandy loam	.24	5
Glenberg loamy very fine sand, loamy fine sand	.17	5
Glenberg very fine sandy loam	.37	5
Goshen loam	.28	5
Gothenburg loamy sand	.17	2
Haverson fine sandy loam	.20	5
Haverson silt loam, loam	.32	5
Haverson silty clay loam, clay loam	.32	5
Havre silt loam	.32	5
Hemmingford loam	.28	5
Hisle loam	.37	3
Hoffland fine sandy loam	.20	5
Hoffland fine sandy loam, wet	.20	5
Imlay loam	.32	2
Inavale fine sand	.15	5
Inavale loamy fine sand	.17	5
Interior silty clay loam	.32	5
Ipage sand, fine sand	.15	5
Ipage loamy sand, loamy fine sand	.17	5
Janise loamy fine sand	.17	5
Janise loam, drained	.43	5
Jayem loamy fine sand	.17	5
Jayem loamy very fine sand	.20	5
Jayem fine sandy loam	.20	5
Kadoka silt loam	.32	4
Keith loam	.28	5
Keith silt loam	.32	5
Keota silt loam	.37	4
Kuma silt loam	.32	5
Kyle silty clay	.37	5
Las fine sandy loam	.24	5
Las loam	.32	5
Las Animas fine sandy loam	.24	5
Las Animas very fine sandy loam	.28	5
Las Animas loam, silt loam	.32	5
Lisco loamy fine sand	.15	5
Lisco very fine sandy loam	.37	5
Lohmiller silty clay loam, silty clay	.32	5
Lute fine sandy loam	.24	3
Manter fine sandy loam	.20	5
Marlake very fine sandy loam, fine sandy loam	.20	2
McCook fine sandy loam	.20	5
McCook very fine sandy loam	.32	5
McCook loam	.32	5
McCook silty clay loam	.32	5
McGrew fine sandy loam	.24	4
McGrew loam	.32	4
McKelvie loamy fine sand	.17	5
Minatare loam	.43	3
Minnequa silty clay loam	.37	2
Mitchell fine sandy loam	.24	5
Mitchell very fine sandy loam	.43	5
Mitchell silt loam	.43	5
Norrest clay loam, loam	.37	4
Oglala very fine sandy loam	.32	5
Oglala loam	.28	5
Orella silty clay loam	.37	2
Orella silty clay, clay	.32	2
Otero loamy fine sand	.17	5
Otero loamy very fine sand	.17	5
Otero fine sandy loam	.20	5
Otero very fine sandy loam, loam	.37	5
Parshall sandy loam	.24	5
Penrose silty clay loam	.32	1
Pierre silty clay	.37	4
Platte loam	.28	2
Richfield silt loam, loam	.32	5
Rosebud loam	.28	4
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 sandy loam	.17	2
Scott silt loam	.37	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

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*
Alice fine sandy loam	.20	5
Alliance silt loam	.32	5
Almeria loamy fine sand	.17	5
Almeria fine sandy loam	.24	5
Altvan loam	.28	4
Anselmo loamy fine sand	.17	5
Anselmo fine sandy loam	.20	5
Bankard loamy fine sand, loamy coarse sand	.17	5
Bayard very fine sandy loam	.20	5
Bayard loam	.28	5
Bolent loamy fine sand	.17	5
Bolent fine sandy loam	.24	5
Bridgeport loam	.32	5
Bridget very fine sandy loam	.32	5
Busher loamy very fine sand	.20	5
Busher very fine sandy loam	.32	5
Busher fine sandy loam	.20	5
Canyon fine sandy loam	.24	2
Canyon loam, very fine sandy loam	.32	2
Caruso loam	.28	5
Chappell sandy loam	.20	4
Chappell loam	.28	4
Cheyenne loam	.28	4
Colby silt loam	.43	5
Craft loamy very fine sand	.24	5
Creighton very fine sandy loam	.32	5
Crowther loam	.28	5
Dawes loam	.37	4
Dix gravelly loam	.20	2
Dix sandy loam, loam	.20	2
Doger loamy fine sand	.17	5
Duda loamy fine sand	.17	4
Dunday loamy fine sand	.17	5
Duroc silt loam	.32	5
Dwyer loamy sand	.17	5
Els fine sand	.15	5
Elsmere fine sand	.15	5
Elsmere loamy fine sand	.17	5
Elsmere fine sandy loam	.20	5
Epping loam	.43	2
Gannett sandy loam	.20	5
Gannett loam	.24	5
Glenberg fine sandy loam	.24	5
Goshen fine sandy loam	.20	5
Goshen silt loam	.20	5
Gothenburg sandy loam, fine sandy loam	.24	2
Havre loam	.28	5
Hennings fine sandy loam	.20	5
Hoffland fine sandy loam	.20	5
Hoffland loam	.24	5
Inavale fine sand	.15	5
Inavale loamy fine sand	.17	5
Ipage sand, fine sand	.15	5
Ipage loamy fine sand	.17	5
Janise loam, silt loam	.43	5
Jayem fine sandy loam	.20	5
Keith fine sandy loam	.20	5
Keith silt loam	.32	5
Keota silt loam	.37	4
Keya loam	.32	5
Kuma loam	.32	5
Las fine sandy loam	.24	5
Las loam	.32	5
Las Animas loamy sand	.17	5
Las Animas fine sandy loam	.24	5
Laurel loam	.32	5
Libory loamy fine sand	.17	5
Loup fine sand	.17	5
Loup fine sandy loam	.20	5
Loup loam	.28	5
Marlake loam, fine sandy loam	.20	2
McKelvie loamy fine sand	.17	5
Meadin loamy sand, loam fine sand	.17	3
Minatare loam	.43	3
Mitchell very fine sandy loam	.43	5
Mitchell loam	.43	5
Nunn silt loam	.32	5
Ord loam	.28	5
Otero fine sandy loam, sandy loam	.20	5
Platte loam	.28	2
Richfield silt loam	.32	5
Ronson fine sandy loam	.20	4
Rosebud fine sandy loam	.20	4
Rosebud loam	.28	4
Sandose loamy fine sand	.17	5
Sarben loamy fine sand	.17	5
Satanta fine sandy loam	.20	5
Satanta loam	.28	5
Scott silt loam	.37	3
Scott silty clay loam	.37	3
Selia fine sand	.15	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 silt loam	.32	5
Tryon loamy fine sand, fine sand	.17	5
Tryon fine sandy loam	.20	5
Ulysses silt loam	.32	5
Valent fine sand, sand	.15	5
Valent loamy fine sand, loamy sand	.17	5
Valentine fine sand	.15	5
Valentine loamy fine sand, loamy sand	.17	5
Vetal fine sandy loam	.20	5
Wann fine sandy loam	.20	5
Wann loam	.28	5
Wildhorse loamy fine sand	.17	3
Yockey silt loam	.37	5

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*
Alda fine sandy loam	.20	4
Alliance silt loam	.32	5
Altvan loam	.28	4
Anselmo loamy fine sand	.17	5
Anselmo sandy loam, fine sandy loam	.20	5
Ascalon fine sandy loam	.20	5
Bankard fine sand	.15	5
Bankard loamy fine sand, loamy sand	.17	5
Banks fine sand	.15	5
Banks loamy fine sand	.17	5
Barney silty clay loam	.28	5
Bayard loamy fine sand	.17	5
Bayard fine sandy loam	.20	5
Bayard loam	.28	5
Blanche very fine sandy loam	.32	4
Boel loamy fine sand	.17	5
Bridgeport loam, silt loam	.32	5
Bridget silt loam, loam	.32	5
Bushman very fine sandy loam	.32	5
Canyon fine sandy loam	.24	2
Canyon loam	.32	2
Caruso loam	.28	5
Cass fine sandy loam	.20	5
Chappell fine sandy loam	.20	4
Colby silt loam, loam	.43	5
Coly silt loam, loam	.43	5
Cozad silt loam	.32	5
Cozad silty clay loam	.32	5
Creighton very fine sandy loam	.32	5
Dailey loamy sand	.17	5
Dix gravelly loam	.20	2
Doger loamy fine sand	.17	5
Duda loamy sand	.17	4
Dunday loamy fine sand	.17	5
Duroc loam, silt loam	.32	5
Dwyer loamy fine sand	.17	5
Els fine sand	.15	5
Els loamy fine sand	.17	5
Elsmere fine sand	.15	5
Elsmere loamy fine sand	.17	5
Elsmere fine sandy loam	.20	5
Fillmore silt loam	.37	4
Gannett fine sandy loam, sandy loam	.20	5
Gannett loam	.24	5
Gannett silt loam	.28	5
Gibbon silt loam	.32	5
Gibbon loam	.28	5
Glenberg fine sandy loam	.24	5
Glenberg loam	.32	5
Goshen fine sandy loam	.20	5
Goshen silt loam	.32	5
Gothenburg loamy sand	.17	2
Hall silt loam	.32	5
Haverson fine sandy loam	.20	5
Haverson loam	.32	5
Havre fine sandy loam	.20	5
Havre loam	.28	5
Haxtun loamy fine sand	.17	5
Haxtun fine sandy loam	.20	5
Hersh loamy fine sand	.17	5
Hersh fine sandy loam	.24	5
Hobbs fine sandy loam	.20	5
Hobbs silt loam	.32	5
Holdrege fine sandy loam	.20	5
Holdrege silt loam	.32	5
Hord fine sandy loam	.20	5
Hord silt loam	.32	5
Humbarger loam	.28	5
Inavale loamy fine sand	.17	5
Ipage fine sand	.15	5
Janise loam, drained	.37	5
Jayem loamy fine sand	.17	5
Jayem loamy very fine sand	.20	5
Jayem fine sandy loam	.20	5
Keith fine sandy loam	.20	5
Keith silt loam	.32	5
Kuma silt loam	.32	5
Laird fine sandy loam	.20	5
Las sand	.15	5
Las fine sandy loam	.24	5
Las loam	.32	5
Las Animas loamy fine sand	.17	5
Lawet fine sandy loam	.20	5
Lawet loam, silt loam	.28	5
Lex loam	.28	4
Loup loamy fine sand	.17	5
Loup fine sandy loam	.20	5
Mace silt loam	.32	4
Marlake fine sandy loam	.20	5
McCash very fine sandy loam	.32	5
McCook silt loam, loam	.32	5
Ord fine sandy loam	.20	5
Otero loam	.37	5
Ovina fine sandy loam	.20	5
Platte loam	.28	2
Rauville loam	.32	5
Rosebud loam	.28	4
Sarben loamy fine sand	.17	5
Sarben loamy very fine sand	.24	5
Satanta very fine sandy loam	.32	5
Satanta loam	.28	5
Scott silt loam	.37	3
Scott silty clay loam	.37	3
Silver Creek silt loam	.32	3
Tassel loamy sand	.17	2
Tryon loamy fine sand	.17	5
Uly silt loam	.32	5
Ulysses silt loam, loam	.32	5
Ulysses clay loam	.32	5
Valent fine sand, sand	.15	5
Valent loamy sand	.17	5
Valentine fine sand	.15	5
Valentine loamy fine sand	.17	5
Vebar fine sandy loam	.28	4
Vetal loamy very fine sand	.20	5
Vetal fine sandy loam	.20	5
Wann fine sandy loam	.20	5
Wann loam	.28	5
Woodly loamy fine sand	.17	5
Woodly fine sandy loam	.20	5

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*
Albaton silty clay, clay	.28	5
Almeria loamy fine sand	.17	5
Almeria fine sandy loam	.24	5
Anselmo loamy fine sand	.17	5
Anselmo fine sandy loam, very fine sandy loam	.20	5
Anselmo loam	.28	5
Barney fine sandy loam	.20	5
Barney loam, silt loam	.28	5
Bazile loam, silt loam	.32	4
Blake silty clay loam	.37	5
Blendon fine sandy loam	.20	5
Boel loamy fine sand	.17	5
Boel fine sandy loam	.20	5
Boel silty clay loam	.32	5
Boelus fine sand	.15	5
Boelus loamy fine sand, loamy sand	.17	5
Bolent loamy fine sand, loamy sand	.17	5
Bolent fine sandy loam	.24	5
Boyd silty clay	.37	4
Bristow silty clay	.43	2
Brocksburg loam	.28	4
Brocksburg fine sandy loam	.20	4
Brunswick loamy sand	.17	4
Brunswick fine sandy loam	.24	4
Calamus loamy sand, loamy fine sand	.17	5
Cass fine sandy loam	.20	5
Cass loam	.28	5
Coly silt loam	.43	5
Cozad silt loam	.32	5
Crofton silt loam	.43	5
Duda loamy fine sand	.17	4
Dunday loamy fine sand, loamy sand	.17	5
Dunn loamy sand, loamy fine sand	.17	5
Els fine sand	.15	5
Els loamy fine sand, loamy sand	.17	5
Elsmere loamy fine sand	.17	5
Elsmere fine sandy loam	.20	5
Eltree silt loam	.32	5
Fillmore silt loam	.37	4
Gannett fine sandy loam	.20	5
Gannett loam	.24	5
Gates very fine sandy loam	.37	5
Gates silt loam	.37	5
Gibbon silt loam	.32	5
Graybert very fine sandy loam	.32	5
Grigston silt loam	.32	5
Hall silt loam	.32	5
Haynie silt loam	.37	5
Hersh loamy fine sand	.17	5
Hersh fine sandy loam	.24	5
Hobbs silt loam	.32	5
Holdrege silt loam	.32	5
Holdrege silty clay loam	.32	5
Holt fine sandy loam	.20	4
Hord fine sandy loam	.20	5
Hord silt loam	.32	5
Inavale fine sand, sand	.15	5
Inavale loamy fine sand	.17	5
Inavale fine sandy loam	.24	5
Ipage sand, fine sand	.15	5
Ipage loamy sand, loamy fine sand	.17	5
Jansen fine sandy loam	.20	4
Jansen loam	.28	4

Soil Series and Type	*K Factor*	*T Value*
Johnstown fine sandy loam	.20	5
Johnstown loam	.28	5
Josburg fine sandy loam	.20	5
Josburg loam	.28	5
Kenesaw very fine sandy loam	.32	5
Keota silt loam	.37	4
Labu silty clay	.32	4
Lamo silty clay loam	.32	5
Lamo loam	.32	5
Lawet loam, silt loam	.28	5
Leshara silt loam	.32	5
Lex loam	.28	4
Libory loamy fine sand	.17	5
Loretto loam	.28	5
Loup fine sandy loam	.20	5
Loup loam	.28	5
Lute fine sandy loam	.24	3
Lute loam	.32	3
Lynch silty clay	.37	4
Manter loamy fine sand	.17	5
Manter fine sandy loam	.20	5
Mariaville loam	.37	2
Mariaville silt loam	.37	2
Marlake loamy fine sand	.17	2
Marklake fine sandy loam	.20	2
McKelvie fine sand	.15	5
McKelvie loamy fine sand	.17	5
Meadin loamy sand	.17	3
Meadin sandy loam, fine sandy loam, gravelly sandy loam	.20	3
Meadin loam	.28	3
Munjor fine sandy loam	.24	5
Nimbro silt loam	.28	5
Nora silt loam	.32	5
O'Neill loamy fine sand, loamy sand	.17	4
O'Neill fine sandy loam, sandy loam	.20	4
O'Neill loam	.28	4
Onawa silty clay	.32	5
Onita silt loam	.28	5
Ord fine sandy loam	.20	5
Ord very fine sandy loam	.32	5
Ord loam	.28	5
Ovina loam	.28	5
Paka fine sandy loam	.20	5
Paka loam	.28	5
Pivot loamy fine sand, loamy sand	.17	4
Promise silty clay	.37	5
Ree loam	.28	5
Ree silt loam	.32	5
Reliance silt loam	.32	5
Reliance silty clay loam	.32	5
Ronson fine sandy loam	.20	4
Rusco silty clay loam	.32	5
Sandose loamy fine sand	.17	5
Sansarc silty clay	.37	2
Schamber gravelly sandy loam	.17	2
Scott silt loam	.37	3
Scott silty clay loam	.37	3
Selia loamy fine sand	.17	3
Simeon sand, fine sand	.15	5
Simeon loamy sand	.17	5
Simeon sandy loam	.24	5
Tassel loamy sand	.17	2
Tassel loamy fine sand	.17	2

Table 4. Continued

Soil Series and Type	*K Factor*	*T Value*
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

Table 5. Soil erodibility (K) values and soil loss tolerance (T) values for major soils applicable to the following counties: Antelope, Buffalo, Dawson, Franklin, Furnas, Greeley, Gosper, Hall, Harlan, Howard, Kearney, Knox, Phelps, Sherman, Wheeler, and Valley. T is measured in tons per acre per year.

Soil Series and Type	*K Factor*	*T Value*
Albaton silty clay	.28	5
Alcester silty loam	.28	5
Alda fine sandy loam	.20	4
Alda loam	.28	4
Almeria loamy fine sand	.17	5
Anselmo fine sandy loam, very fine sandy loam	.20	5
Anselmo loam	.28	5
Aowa silt loam	.32	5
Barney loam	.28	5
Bazile loamy fine sand, fine sand	.17	4
Bazile loam	.32	4
Belfore silty clay loam	.32	5
Betts clay loam	.28	5
Blendon fine sandy loam	.20	5
Blendon loam	.28	5
Blyburg silty clay loam	.32	5
Boel loamy fine sand	.17	5
Boel fine sandy loam	.20	5
Boel loam	.28	5
Boelus fine sand	.15	5
Boelus loamy fine sand, loamy sand	.17	5
Bristow silty clay	.43	2
Brunswick fine sandy loam	.24	4
Butler silt loam	.37	4
Campus loam	.28	4
Canyon loam	.32	2
Cass fine sandy loam	.20	5
Cass loam	.28	5
Colby silt loam	.43	5
Colo silt loam	.28	5
Coly silt loam	.43	5
Cozad silt loam	.32	5
Crofton silt loam	.43	5
Darr fine sandy loam	.20	4
Darr silt loam	.28	4
Detroit silt loam	.37	5
Doger fine sand	.15	5
Doger loamy fine sand	.17	5
Dunday loamy fine sand	.17	5
Els loamy fine sand, loamy sand	.17	5
Elsmere fine sand	.15	5
Elsmere loamy fine sand	.17	5
Elsmere fine sandy loam	.20	5
Eltree silt loam	.32	5
Exline fine sandy loam	.20	3
Exline silt loam	.32	3
Fillmore silt loam	.37	4
Fillmore silty clay loam	.37	4
Fluvaquents sand	.15	5
Gates very fine sandy loam	.37	5
Gavins silt loam	.43	2
Geary silty clay loam	.32	5
Gibbon silt loam	.32	5
Gibbon loam	.28	5
Gosper fine sandy loam	.20	5
Gosper loam	.28	5
Gothenburg fine sandy loam	.24	2
Gothenburg loamy sand	.17	2
Gothenburg loam	.32	2
Grable silt loam	.32	4
Grigston silt loam	.32	5
Hall silt loam	.32	5
Hastings silt loam	.32	5
Hersh fine sandy loam	.24	5
Hobbs silt loam	.32	5
Holder silt loam	.32	5
Holder silty clay loam	.32	5
Holdrege silt loam	.32	5
Holdrege silty clay loam	.32	5
Hord fine sandy loam	.20	5
Hord silt loam	.32	5
Hord silty clay loam	.32	5
Inavale fine sand	.15	5
Inavale loamy sand, loamy fine sand	.17	5
Inavale fine sandy loam, loam	.24	5
Ipage fine sand	.15	5
Ipage loamy sand, loamy fine sand	.17	5
Kenesaw fine sandy loam	.20	5
Kenesaw very fine sandy loam	.32	5
Kenesaw silt loam	.32	5
Kezen silt loam	.32	5
Labu silty clay	.32	4
Lamo silt loam	.32	5
Lamoure silt loam	.28	5
Lawet loam, silt loam	.28	5
Leshara fine sandy loam	.20	5
Leshara silt loam	.32	5
Lex loam, silt loam	.28	4
Libory fine sand	.15	5
Libory loamy fine sand	.17	5
Longford loam	.28	5
Loretto fine sandy loam, sandy loam	.20	5
Loretto loam	.28	5
Loup fine sandy loam	.20	5
Loup loam	.28	5
Lynch silty clay	.37	4
Mariaville loam	.37	2
Marlake loamy fine sand	.17	2
Massie loam	.37	3
McCook sand, overwash	.15	5
McCook fine sandy loam	.20	5
McCook silt loam, loam	.32	5
Meadin loamy sand	.17	3
Meadin sandy loam	.20	3
Moody silty clay loam	.32	5
Munjor loamy fine sand	.17	5
Munjor fine sandy loam	.24	5
Nimbro silt loam	.28	5
Nora silt loam	.32	5
Nora silty clay loam	.32	5
Nuckolls silt loam	.32	5
O'Neill fine sandy loam, sandy loam	.20	4
O'Neill loam	.28	4
Onawa silty clay	.32	5
Ord fine sandy loam	.20	5
Ord loam	.28	5
Ortello loamy fine sand	.17	5
Ortello fine sandy loam	.20	5
Ortello loam	.28	5
Orwet loam	.28	5
Ovina loamy fine sand	.17	5
Ovina fine sandy loam	.20	5
Paka loamy fine sand	.17	5
Paka loam	.28	5
Percival silty clay	.28	4
Platte loam	.28	2
Redstoe silt loam	.32	4

Table 5. Continued

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	5
Thurman loamy fine sand	.17	5
Thurman fine sandy loam	.20	5
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 loam	.28	5
Wann silt loam	.32	5
Wewela fine sandy loam	.20	4
Wewela loam	.28	4
Wood River fine sandy loam	.28	3
Wood River silt loam	.37	3

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*
Adair clay loam	.37	4
Albaton silt loam	.28	5
Albaton silty clay	.28	5
Alda fine sandy loam	.20	4
Alda loam	.28	4
Anselmo fine sandy loam	.20	5
Anselmo loam	.28	5
Barney loam	.28	5
Blendon fine sandy loam	.20	5
Boel fine sandy loam	.20	5
Boel loam	.28	5
Brocksburg sandy loam	.20	4
Burchard clay loam, loam	.28	5
Butler silt loam	.37	4
Butler silty clay loam	.37	4
Carr fine sandy loam	.24	5
Cass fine sandy loam	.20	5
Cass very fine sandy loam	.32	5
Cass loam	.28	5
Colo silty clay loam	.28	5
Coly silt loam	.43	5
Cozad silt loam	.32	5
Crete silt loam	.37	4
Crete silty clay loam	.37	4
Crofton silt loam	.43	5
Darr fine sandy loam	.20	4
Detroit silt loam	.37	5
Dickinson fine sandy loam	.20	4
Eudora silt loam	.32	5
Fillmore silt loam	.37	4
Fillmore silty clay loam	.37	4
Geary silty loam	.32	5
Geary silty clay loam	.32	5
Gibbon silt loam, silty clay loam	.32	5
Gibbon loamy sand	.17	5
Gothenburg sandy loam	.24	2
Grigston silt loam	.32	5
Hall silt loam	.32	5
Hastings silt loam	.32	5
Hastings silty clay loam	.32	5
Haynie silt loam	.37	5
Hedville sandy loam	.20	2
Hersh fine sandy loam	.24	5
Hobbs silt loam	.32	5
Holder silt loam	.32	5
Holder silty clay loam	.32	5
Holdrege silt loam	.32	5
Hord silt loam	.32	5
Humbarger silt loam	.32	5
Ida silt loam	.43	5
Inavale loamy fine sand, loamy fine sand	.17	5
Inavale fine sandy loam	.24	5
Jansen sandy clay loam	.28	4
Judson fine sandy loam	.20	5
Judson silt loam	.28	5
Kenesaw silt loam	.32	5
Kennebec silt loam	.32	5
Kezen silt loam	.32	5
Kipp silty clay loam	.32	2
Kipson silt loam	.32	2
Lamo silty clay loam	.32	5
Lamoure silty clay loam[2/]	.28	5
Lancaster loam	.28	4
Leshara silt loam	.32	5
Lex silt loam	.28	4
Longford silty clay loam	.32	5
Luton silt loam, overwash	.28	5
Luton silty clay loam	.37	5
Luton silty clay	.28	5
Marshall silty clay loam	.32	5
Massie silt loam, silty clay loam	.37	3
Mayberry silty clay loam	.37	4
McCook fine sandy loam	.20	5
McCook silt loam	.32	5
Meadin loamy sand	.17	3
Meadin sandy loam	.20	3
Meadin loam	.28	3
Monona silt loam	.32	5
Morrill loam, clay loam	.28	5
Muir silt loam	.32	5
Muir silty clay loam	.32	5
Munjor loamy fine sand	.17	5
Munjor fine sandy loam	.24	5
Nodaway silt loam, silty clay loam	.37	5
O'Neill fine sandy loam	.20	4
Olbut silt loam	.37	4
Onawa silty clay	.32	5
Ortello fine sandy loam	.20	5
Ortello loam	.28	5
Ovina loamy fine sand	.17	5
Pawnee loam, clay loam	.37	4
Pawnee clay	.37	3
Percival silty clay	.28	4
Platte fine sandy loam	.20	2
Platte loam	.28	2
Ponca silt loam	.32	5
Ponca silty clay loam	.32	5
Rauville loam	.32	5
Roxbury silt loam	.32	5
Rusco silt loam	.32	5
Salmo silt loam	.28	5
Salmo silty clay loam	.28	5
Saltine silt loam	.32	5
Sarpy fine sand	.15	5
Sarpy loamy fine sand	.17	5
Scott silt loam	.37	3
Scott silty clay loam	.37	3
Sharpsburg silty clay loam	.32	5
Shelby clay loam	.28	5
Silver Creek silt loam	.32	3
Simeon loamy sand	.17	5
Sogn silty clay loam	.32	1
Steinauer clay loam, loam	.32	5
Thurman loamy fine sand	.17	5
Thurman fine sandy loam	.20	5
Uly silt loam	.32	5
Valentine loamy fine sand	.17	5
Volin silt loam	.32	5
Wabash silt loam	.28	5
Wabash silty clay	.28	5
Wakeen silty loam, silty clay loam	.32	4
Wann fine sandy loam	.20	5
Wann loam	.28	5
Wood River silt loam	.37	3
Wymore silty clay loam	.37	4
Wymore silty clay	.37	4
Zoe silty clay loam	.32	5
Zook silt loam	.28	5
Zook silty clay loam	.28	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*
Albaton silt loam, silty clay loam	.28	5
Albaton silty clay, clay	.28	5
Alcester silt loam	.28	5
Alcester silty clay loam	.28	5
Alda fine sandy loam, sandy loam	.20	4
Alda loam	.28	4
Anselmo fine sandy loam	.20	5
Aowa silt loam	.32	5
Baltic silty clay loam	.37	5
Baltic silty clay	.37	5
Barney loam	.28	5
Bazile loamy fine sand	.17	4
Bazile loam	.32	4
Bazile silty clay loam	.32	4
Belfore silt loam	.32	5
Belfore silty clay loam	.32	5
Betts loam, clay loam	.28	5
Blake silty clay loam	.37	5
Blencoe silty clay, silty clay loam	.28	5
Blendon fine sandy loam, sandy loam	.20	5
Blendon loam	.28	5
Blyburg silt loam	.32	5
Blyburg silty clay loam	.32	5
Blyburg silty clay, overwash	.28	5
Boel loamy fine sand	.17	5
Boel fine sandy loam	.20	5
Boel loam	.28	5
Boelus loamy fine sand	.17	5
Boone loamy fine sand	.17	4
Boyd silty clay	.37	4
Brocksburg loam	.28	4
Burchard clay loam, silt loam	.28	5
Butler silt loam	.37	4
Butler silty clay loam	.37	4
Calco silt loam, silty clay loam	.28	5
Carr fine sandy loam	.24	5
Caruso loam	.28	5
Cass fine sandy loam	.20	5
Cass loam, silt loam	.28	5
Clamo silty clay	.28	5
Clarno loam	.28	5
Colo fine sandy loam	.20	5
Colo silt loam	.28	5
Colo silty clay loam	.28	5
Crofton silt loam	.43	5
Dudley silt loam	.43	3
Els loamy fine sand	.17	5
Elsmere fine sand	.15	5
Elsmere loamy fine sand	.17	5
Elsmere fine sandy loam	.20	5
Eltree silt loam	.32	5
Exline silt loam	.32	3
Fillmore silt loam	.37	5
Fonner sandy loam	.20	4
Forney silt loam, overwash	.37	5
Forney silty clay	.28	5
Gannett fine sandy loam	.20	5
Gavins silt loam	.43	2
Gayville silt loam	.37	3
Gayville silty clay loam	.37	3
Geary silty clay loam	.32	5
Gibbon silty clay loam	.32	5
Gibbon loamy sand	.17	5
Gibbon loam	.28	5
Gothenburg loamy sand	.17	2
Grable very fine sandy loam	.32	4
Grable silt loam	.32	4
Grigston silt loam	.32	5
Hadar loamy fine sand	.17	5
Hall silt loam	.32	5
Haynie silt loam	.37	5
Hobbs silt loam	.32	5
Holder silt loam	.32	5
Holly Springs silty clay loam	.28	5
Hord fine sandy loam	.20	5
Hord very fine sandy loam	.32	5
Hord silt loam	.32	5
Inavale loamy fine sand, loamy fine sand	.17	5
Inavale fine sandy loam	.24	5
Ipage loamy sand, loamy fine sand	.17	5
Janude fine sandy loam, sandy loam	.20	5
Janude loam	.28	5
Judson silt loam	.28	5
Judson silty clay loam	.28	5
Kenesaw silt loam	.32	5
Kennebec silt loam	.32	5
Kezan silt loam	.32	5
Lamo silt loam	.32	5
Lamo silty clay loam	.32	5
Lamo clay loam	.28	5
Lamoure silt loam	.28	5
Lamoure silty clay loam	.28	5
Lawet fine sandy loam	.20	5
Lawet loam, silt loam, silty clay loam	.28	5
Leisy fine sandy loam	.20	5
Leisy loam	.28	5
Leshara fine sandy loam	.20	5
Leshara silt loam	.32	5
Lex loam, clay loam	.28	4
Libory loamy fine sand	.17	5
Lockton loam	.28	4
Longford loam	.28	5
Loretto fine sandy loam	.20	5
Loretto loam	.28	5
Loup loamy fine sand, loamy sand, fine sand	.17	5
Loup fine sandy loam	.20	5
Loup loam, silt loam	.28	5
Luton silt loam, overwash	.28	5
Luton silty clay loam	.37	5
Luton silty clay, clay	.28	5
Marlake loamy sand	.17	2
Marklake loam	.20	2
Marshall silty clay loam	.32	5
Maskell loam	.28	5
McPaul silt loam	.37	5
Meadin loamy fine sand	.17	3
Meadin sandy loam	.20	3
Merrick loam	.28	5
Modale silt loam	.37	5
Monona silt loam	.32	5
Moody fine sandy loam	.20	5
Moody silt loam	.32	5
Moody silty clay loam	.32	5
Muir silty clay loam	.32	5
Napa silt loam	.28	3
Napier silt loam	.32	5

Table 7. Continued

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	.28	5
Owego silty clay	.32	5
Paka sandy loam	.20	5
Paka sandy clay loam	.28	5
Percival silty clay	.28	4
Platte loam	.28	2
Rauville loam	.32	5
Redstoe silt loam	.32	4
Rokeby silt loam	.32	4
Rusco silt loam	.32	5
Salix silt loam	.28	5
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
Sarpy fine sandy loam	.24	5
Sarpy loam	.28	5
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
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
Trent silty clay loam	.28	5
Valentine fine sand	.15	5
Valentine loamy fine sand	.17	5
Volin silt loam	.32	5
Wann fine sandy loam	.20	5
Wann loam	.28	5
Wann silt loam	.32	5
Waubonsie very fine sandy loam	.32	5
Woodbury silty clay	.28	5
Zook silt loam	.28	5
Zook silty clay loam	.28	5
Zook silty clay	.28	5

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
Ackmore silt loam	.37	5
Adair clay loam	.37	4
Albaton silty clay	.28	5
Benfield silty clay loam	.37	3
Blencoe silty clay	.28	5
Burchard clay loam	.28	5
Butler silt loam	.37	4
Butler silty clay loam	.37	4
Cass loam	.28	5
Colo silt loam	.28	5
Colo silty clay loam	.28	5
Crete silt loam	.37	4
Crete silty clay loam	.37	4
Dickinson fine sandy loam	.20	4
Dow silt loam	.43	5
Edalgo silty clay loam	.37	3
Exline silt loam	.32	3
Fillmore silt loam	.37	4
Geary silty clay loam	.32	5
Grable very fine sandy loam	.32	4
Gymer silty clay loam	.32	5
Hastings silt loam	.32	5
Hastings silty clay loam	.32	5
Haynie silt loam	.37	5
Haynie silty clay, overwash	.28	5
Hedville stony loam	.24	2
Hobbs silt loam	.32	5
Ida silt loam	.43	5
Jansen loam	.28	4
Judson fine sandy loam	.20	5
Judson silt loam	.28	5
Kennebec silt loam	.32	5
Kipson silt loam, silty clay loam	.32	2
Labette silty clay loam	.37	3
Lancaster loam	.28	4
Lanham clay loam	.37	3
Malcolm silt loam	.32	5
Marshall silty clay loam	.32	5
Mayberry silty clay loam, clay loam	.37	4
Mayberry clay	.37	3
Meadin loam	.28	3
Monona silt loam	.32	5
Morrill loam, clay loam	.28	5
Moville silt loam	.32	5
Muir silty loam	.32	5
Nishna silty clay	.37	5
Nodaway silt loam	.37	5
Onawa silt loam	.32	5
Onawa silty clay	.32	5
Pawnee loam, clay loam	.37	4
Pawnee clay	.37	3
Percival silty clay	.28	4
Ponca silt loam	.32	5
Rokeby silty clay loam	.32	4
Sarpy loamy fine sand	.17	5
Sharpsburg silty clay loam	.32	5
Shelby clay loam	.28	5
Sogn silty clay loam	.32	1
Steinauer clay loam	.32	5
Thurman loamy fine sand	.17	5
Wabash silty clay loam	.28	5
Wabash silty clay	.28	5
Wymore silty clay loam	.37	4
Wymore silty clay	.37	4
Zoe silty clay loam	.32	5
Zook silt loam	.28	5
Zook silty clay loam	.28	5
Zook silty clay	.28	5