TR- 92 1978



An Economic Analysis of Agricultural Soil Loss in Crosby County, Texas

D.R. Reneau C.R. Taylor B.L. Harris

Texas Water Resources Institute

Texas A&M University

AN ECONOMIC ANALYSIS OF AGRICULTURAL SOIL

LOSS IN CROSBY COUNTY, TEXAS

Duane R. Reneau C. Robert Taylor B. L. Harris

Technical Report No. 92 Texas Water Resources Institute Texas A&M University

May 1979

ACKNOWLEDGMENTS

This report is one in a series of studies funded by the Texas State Soil and Water Conservation Board and the Texas Department of Water Resources on "Economic Impacts of Various Non-point Source Agricultural Pollution Controls in Texas." The research was conducted under the auspices of the Texas Water Resources Institute, the Texas Agricultural Experiment Station and the Texas Agricultural Extension Service. The authors would like to express their appreciation to Dr. Jack Runkles, Director of the Water Resources Institute, for assistance in organizing and carrying out the research project. Dr. Peggy Glass and Mr. Tom Remaley, Department of Water Resources, and Mr. Harvey Davis, Mr. G. E. Kretzshmar, Jr. and Mr. Charles Rothe formerly of the Soil and Water Conservation Board were instrumental in organizing the project.

Assistance was obtained from a number of others in gathering necessary data and carrying out the research. In particular, several individuals with the USDA Soil Conservation Service, George C. Marks, State Conservationist; Clifford L. Williams, State Resource Conservationist; and Henry C. Bogusch, Jr. are to be thanked for providing soils information, yield data, and soil loss factors.

Special appreciation is extended to Philip E. Mueller and Gary Milton, Research Assistants in the Agricultural Economics Department for their help in data manipulation and assembling some of the tables in the report. The typing was ably done by Mrs. BeeGee Hart.

Any errors or ommissions are the sole responsibility of the authors.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
DESCRIPTION OF THE COUNTY	3
THE APPROPRIATE PLANNING HORIZON	11
Discounting Future Benefits and Costs	12
ON-FARM ECONOMICS OF SOIL CONSERVATION	13
Crop Yields Crop Prices and Production Costs Crop Rotation Soil Loss Factors Yield Loss Attributal to Erosion Profitability of Conservation Practices Cost-Sharing for Terrace Construction Cost	13 16 20 22 30 33 41
SUMMARY AND CONCLUSIONS	43
REFERENCES	45
APPENDIX A	46

A NEW YORK AND AN ADDRESS OF A DESCRIPTION OF A DESCRIPANO OF A DESCRIPANO OF A DESCRIPTION OF A DESCRIPTION

INTRODUCTION

The Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, established a national goal of eliminating the discharge of pollutants into the nation's waterways by 1985. As a step toward that goal an interim water quality standard of "fishable, swimmable waters nationwide" by July 1, 1983 was set. Under section 208 of this law, each state was required to establish a "continuing planning process" to define controls for agricultural non-point sources of water pollution.

Section 208 calls for the development of state and area-wide water quality management plans. The plans are to include "a process to (i) identify if appropriate, agriculturally and silviculturally related non-point sources of pollution, including runoff from manure disposal areas, and from land used for livestock and crop production, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources."

In an earlier group of technical reports (TR 87, 88, 90, 93, 94) in this series, a model was developed to measure the net social benefits from controlling agricultural sediment given various policy options. This was done by contrasting benefits to be gained from reducing the sediment load in a watershed against costs involved in achieving that reduction using various voluntary or mandatory policies to accomplish the reduction. It was a major conclusion of these studies that no policy which restricted soil loss to less than that which was economically desirable from the farmers own viewpoint would

generate benefits greater than the costs involved. This finding, in the watersheds of major sediment control concern lead to a decision to change the base area for this report to a county instead of a watershed and to only deal with the on-farm consequences of various management practices. These on-farm consequences would include the changes in topsoil loss and the yield losses that result from losing topsoil. Also included are profit levels that could be expected from different management practices and how the present value of a stream of these profits would vary over various planning horizons.

DESCRIPTION OF THE COUNTY

Crosby County (figure 1) is located in west Texas and includes portions of both the High Plains and Rolling Plains Land Resources Areas of the Southern Great Plains. It encompasses an area of 911 square miles. Approximately fifty-five percent of the county's 583,000 acres is cropland. The county is extensively irrigated with irrigated cotton and wheat as the principal cash crops, though grain sorghum, corn, other small grains and some vegetables are also grown. Like much of West Texas, Crosby County suffers from recurring periods of drought. Rainfall is adequate during some years, but satisfactory yields are produced during dry years only on irrigated fields. The county contains both High Plains and Rolling Plains soil associations, the northwestern two-thirds of the county being considered High Plains while the southwestern onethird is made up of Rolling Plains soil associations.

The county is drained by the White River and several tributaries of the Brazos River, including the North Fork, Double Mountain Fork, and Salt Fork. The White River, which runs roughly parallel to the eastern border of the county, and its tributary creeks gather runoff from the Rolling Plains area in the county.

The High Plains portion of the county is characterized by a flat surface with a general southeastern slope. The surface contains many shallow depressions or sinks called playas. Only after heavy rains is runoff adequate for the High Plains to contribute runoff

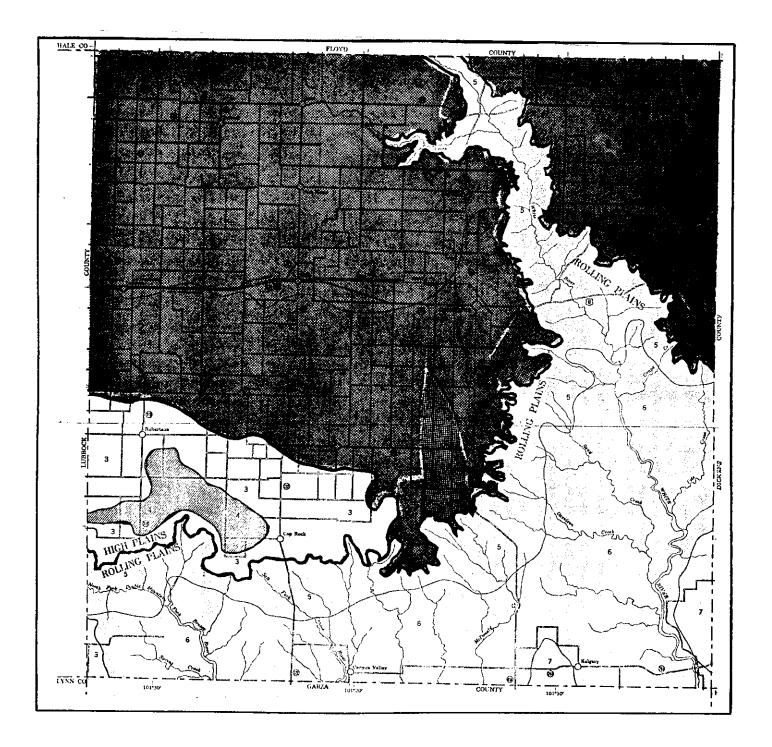


Figure 1. Crosby County, Texas.

water to the various creeks along the edges of the Cap Rock Escarpment. There are few entrenched drainages in the High Plains portion of the county.

Soils of the county are in general shallow to deep, slowly to very slowly permeable clay loams on the High Plains; very shallow to deep, moderately to somewhat rapidly permeable fine sand loams and clay loams in the area along the Cap Rock Escarpment; and very shallow to deep, moderately to very slowly permeable clay loams in the Rolling Plains.

The dominant soil series in the county are Amarillo, Mansker, Miles, Olton, Pullman, Vernon, and Zita. The individual soil mapping units and the extent of each within the county are listed in table 1. Also listed in table 1 is the four character alpha-numeric code which identifies each mapping unit for the remainder of this report.

Crosby County has a subhumid climate. It lies in an area transitional between the semi-arid climate of West Texas and New Mexico and the more humid climate of eastern Texas. The amount of monthly and annual rainfall varies over a wide range since precipitation comes mainly during very heavy showers or thunderstorms. Maximum rainfall is generally during May, June, and July when warm moist air from the Gulf of Mexico is carried inland causing moderate to heavy thunderstorms, sometimes accompanied by hail. In all months except May and July there can be periods of two to three weeks during which no measurable rainfall occurs.

Soil Mapping Units	Identification Code	Total Acreage
Abilene clay loam, 0-1% slopes	AB01	3,328
Abilene clay loam, 1-3% slopes	AB13	6,291
Amarillo fine sandy loam, 0-1% slopes	AF01	28,232
Amarillo fine sandy loam, 1-3% slopes	AF13	4,983
Amarillo fine sandy loam, 0-3% slopes	AMO 3	7,216
Badland	BDLD	4,178
Berthoud fine sandy loam, 1-3% slopes	BF13	2,673
Berthoud fine sandy loam, 3-5% slopes	BF35	4,201
Berthoud fine sandy loam, 5-8% slopes	BF58	8,393
Berthoud loam, 3-5% slopes	ВМ35	1,567
Berthoud loam, 5-8% slopes	BM58	3,585
Brownfield fine sand	BDFS	4,245
Brownfield soils, severely eroded	BSSE	9,174
Bippus clay loam, 1-3% slopes	BT13	1,407
Drake clay loam, 1-3% slopes	DC13	2,217
Drake clay loam, 3-5% slopes	DC35	514
Hilly gravelly land	HYGL	659
Likes loamy fine sand	LLFS	911
Loamy alluvial land	LYAL	6,286
Lofton fine sandy loam	LFSL	867
Mansker fine sandy loam, 0-1% slopes	MA01	464
Mansker fine sandy loam, 1-3% slopes	MA13	1,727
Mansker fine sandy loam, 3-5% slopes	MA35	10,091
Mansker loam, 0-1% slopes	MK01	702
Mansker loam, 1-3% slopes	MK13	2,508
Mansker loam, 3-5% slopes	MK35	1,160
Mansker-Potter complex	MPCX	53,570
Miles loamy fine sand, 0-3% slopes	MMO 3	3,751
Miles loamy fine sand, 3-5% slopes	MM35	916
Miles fine sandy loam, 0-1% slopes	MN01	1,990
Miles fine sandy loam, 1-3% slopes	MN13	15,322
Miles fine sandy loam, 3-5% slopes	MN 35	4,768

Table 1. Acreages of Cropland and Rangeland in Crosby County by Soil Mapping Unit. $\underline{a}/$

Soil Mapping Units	Identification Code	Total Acreage
Olton loam, 0-1% slopes	OT01	109,814
Olton loam, 1-3% slopes	OT13	14,960
Portales fine sandy loam, 0-1% slopes	PF01	2,372
Portales fine sandy laom, 1-3% slopes	PF13	357
Portales loam, 0-1% slopes	PM01	6,038
Portales loam, 1-3% slopes	PM13	9,394
Potter soils	PTSS	4,625
Pullman silty clay loam, 0-1% slopes	PU01	137,259
Pullman silty clay loam, 1-3% slopes	PU13	6,338
Randall clay	RLCY	18,068
Randall fine sandy loam	RFSL	398
Rough broken land	RHBL	2,359
Sandy alluvial land	SYAL	1,736
Spur clay loam	SCYL	2,543
Spur fine sandy loam	SFSL	4,674
Stamford clay, 1-3% slopes	SM13	1,969
Stamford soils, 0-1% slopes	ST01	1,970
Tivoli fine sand	TVFS	488
Vernon-Traversilla complex	VTCX	2,200
Vernon clay loam, 1-3% slopes	VC13	24,541
Vernon clay loam, 3-15% slopes	V315	12,111
Zita fine sandy loam, 0-1% slopes	ZF01	3,083
Zita loam, 0-1% slopes	ZM01	5,803
Zita loam, 1-3% slopes	Zm13	2,644
Gravel and caliche pits and storage		970
River channels		2,845
Total		583,040
	······································	· · · ·

Table 1. Acreages of Cropland and Rangeland in Crosby County by Soil Mapping Unit $\frac{a}{a}$ (continued).

 <u>a</u>/ Source: U.S. Department of Agriculture, Soil Conservation Service, <u>Soil Survey Crosby County, Texas</u>. U.S. Government Printing Office, Washington, D.C., January 1966. Snow falls occasionally during the winter months but is generally light and remains on the ground only a short time. Temperatures, like rainfall and snow vary greatly, especially during the winter months. From November through March, frequent surges of cold air from the north bring rapid and pronounced cooling to the region. Summer days are hot but the low humidity and constant breezes modify the effects of the heat. The average frost-free period is 206 days.

In the period from 1970 to 1976 approximately 145,000 acres have been planted to cotton each year, 75,000 acres to grain sorghum and 35,000 acres to wheat and other small grains. Table 2 gives the complete breakdown of agricultural land use by acreage and percent.

In a 1976 survey of conservation problems in Texas, agricultural non-point source pollutants in the High Plains Area were judged by Soil and Water Conservation District Directors to be a problem of slight to moderate severity, as were floods. They were ranked fifteenth and eighteenth, respectively, among the area's problems. However, water erosion, as a soil management problem, and the economics of conservation were ranked eighth and fifth, respectively, being considered problems of slight to fairly moderate proportions. Thus, the on-farm economics of conservation and water erosion problems is viewed as more critical than the off-farm down stream flooding and pollution problem. The complete survey results for the High Plains Land Resource Area are given in Table 3.

Land Use	Acreage	Percent
Cropland		
Cotton	145,330	24.9%
Grain Sorghum	74,790	12.8%
Wheat, small grains	35,070	6.0%
Corn, soybeans and main crops	5,340	1.0%
Range and Pasture	264,210	45.3%
fiscellaneous <u>b</u> /	58,300	10.0%
Total	583,040	100.0%

Table 2.	Average Agricultural Land Use in Crosby County for the	
	Years 1970-1976. <u>a</u> /	

<u>a</u>/ Source: Texas Dept. of Agriculture and USDA Statistical Reporting Service. <u>Texas County Statistics</u>, Compiled by Texas Crop and Livestock Reporting Service, Austin, Texas, 1970-1976.

 \underline{b} / Includes roads, railroads, towns, stream channels, etc.

Conservation Problems	Rank	Present Severity-/	Change in Condition in ₂ Past 10 Years-
Water-Related Problems			<u></u>
Non-Point Source Pollution Agricultural Non-Point Source Pollutants	15	1.37	0.15
Silvicultural Non-Point Source Pollutants	24	0.57	0.02
Mining Operations Non-Point Source Pollutants	22	0.82	-0.12
Construction Site Non-Point Source Pollutants	19	1.02	-0.15
Waste Disposal Non-Point Source Pollutants	16	1.30	-0.17
Salt Water Intrusion	18	1.10	-0.02
Hydrologic Modifications	23	0.67	-0.02
Floods Inadequate Drainage Inefficient Irrigation Systems Improper Use of Ground Water	18 20 7 10	1.10 1.00 1.95 1.77	-0.07 -0.10 0.52 0.67
Soil Management Problems			
Water Erosion Wind Erosion Soil Compaction Inefficient Tillage Systems Salinity Loss of Soil Moisture	8 3 13 11 21 6	1.92 2.15 1.60 1.72 0.90 1.97	0.20 0.60 0.22 0.60 0.15 0.35
Plant Management Problems			
Undesirable Brush & Weeds Weeds on Cropland Difficulty of Grass Establishment Overgrazing	9 2 1 10	1.87 2.17 2.20 1.77	-0.35 -0.15 0.25 0.17
Other Problems, Issues, & Policies			
Economics of Conservation	5	2.05	-0.50

Table 3. Soil and Water Conservation District Director's Ratings of Conservation Problems in the High Plains Land Resource Area.^{a/}

¹ Source: Association of Texas Soil and Water Conservation District. <u>Conservation Problems in Texas</u>, Temple, Texas, Oct. 1976.

<u>1</u> /	Scale of Present Severity	<u>2/</u>	Scale of Change in Condition
	0.0 - 1.5 Slight to None		-1.52.5 Much Worse
	1.5 - 2.5 Moderate		-0.51.5 Worse
	2.5 - 3.5 Severe		-0.5 - 0.0 Slight Decline
	3.5 - 4.5 Very Severe		0.0 - 0.5 Slight Improvement
	·		0.5 - 1.5 Better
			1.5 - 2.5 Much Better

THE APPROPRIATE PLANNING HORIZON

The effect of soil conservation and erosion control on the agricultural economy is felt only over a period of years as the mix of inputs change for a given output. Erosion carries away topsoil reducing soil fertility and reducing crop yields. If erosion is slowed, future crop yields will be higher than they would otherwise have been, given the same level of management.

Farmers make many short-run decisions because they are concerned with the immediate or next year's income. On the surface this suggests that farmers would use a short time horizon for planning conservation practices. However, most farmers and landowners are concerned about the future value of their land in addition to income flow. Inasmuch as the agricultural component of land values is the capitalized value (present value) of a highest and best use profit stream into perpetuity, and given the limited alternative uses for agricultural land in this part of Texas, the value of the land is tied closely to its future agricultural productivity. Thus, it was important that this study consider not only present productivity but also the effect on future productivity, and hence land values, of cropping and conservation practices. Therefore, a long planning horizon is essential when determining appropriate combinations of crop rotations and conservation practices a landowner should employ. In order to emphasize this point and to demonstrate the importance of the length of the planning horizon, calculations were made for time horizons of 10, 100 and 200 years.

Discounting Future Benefits and Costs

As a point of reference from which to calculate the present value of future benefits and costs, 1977 was designated the base year.

All future benefits and costs were discounted to 1977 dollars using standard discounting techniques and a real interest rate of approximately 1.5 percent. The 1.5 percent rate was calculated by assuming that the long-run real interest rate was approximated by the difference of inflation and bank interest rates for the last 10 years. The average inflation rate of the last 10 years, which is 5.8 percent, was thus subtracted from the 7.3 percent average private interest rate charged by banks over the same 10 year period to arrive at the 1.5 percent real interest rate.

Present values of net returns associated with particular crop production activities are given in this study. Present value of net returns was computed as:

$$PV = \sum_{t=0}^{T} \frac{(B_t - C_t)(1 + i)^t}{(1 + r)^t}$$

where

Σ = summation of discounted benefits and costs over time t = time, in years B_t = gross benefits in year t C_t = gross costs in year t i = inflation rate (i.e., 5.8 percent) r = nominal interest rate (i.e., 7.3 percent) T = length of planning horizon

ON-FARM ECONOMICS OF SOIL CONSERVATION

In order to study on-farm income consequences of soil conservation, a great deal of data both technical and economic is necessary. Data required for this type of analysis include: (a) expected yields of all relevant crops for each soil in the watershed; (b) expected prices for each crop and associated production costs; (c) additional costs for applicable conservation practices; (d) expected soil loss associated with each cropping practice -- soil type combination; and (e) effects of crop rotations on yield of individual crops. These sets of data were combined to estimate net present value returns for each crop rotation -- conservation practice -soil mapping unit combination over time periods of 10, 100 and 200 years.

Crop Yields

Table 4 gives the expected yield of four major crops in Crosby County for each soil mapping unit plus the yield of range grasses that could be expected if the land is not cropped.

Yields for irrigated crops are given for those soils that are presently irrigated. All yields are for a high level of management.

	Wheat (bu.)			50	45															55	55	25	25	20	25	20		
Irrigation	Grain Sorghum (bu.)			102.70	93.30															130.70	130.70	51.30	51.30	42.00	46.70	37.30		
	Cotton (1bs.)			1000	850															850	850	400	400		350			
	Range (AUM)	. 70	.70	.70	. 75	.73	.82	.82	.82	.73	.73	.82	.54	. 88	.51	.51	.51	.73	. 80	.66	.66	.73	.70	.70	.73	.73	. 73	.47
	Pasture (tons)	2.5	2.5	2.9	2.9	2.9	2.9	2.9		2.5		2.9	2.9	2.5	2.5	2.5			2.9	2.5	2.9	2.1	2.1	2.1	2.1	2.1	2.1	
	Wheat (bu.)	30	30	1.5	12	12	12	10		10				18	10					15	15	12	10		12	12	10	
	Sorghum (bu.)	32.67	28.00	23.33	20.00	20.00	18.33	15.00		18.33				23.33	11.20					18.67	18.67	18.33	18.33		16.67	16.67	13.00	
	Cotton (1bs.)	275	275	250	200	225	175	150		175				225						190	190	150	150		150	125	115	
	Soil	AB01	AB13	AF01	AF13	AM03	BF13	BF35	BF58	BM35	BM58	BDFS	BSSE	BT13	DC13	DC35	НУСГ	LLFS	LYAL	LINCL	LFSL	MA01	MA13	MA35	MK01	MK13	MK35	MPCX

Crop Yields for Each Soil Mapping Unit in Crosby County. Table 4.

14

		• • • •																• .													
, , , , ,		Wheat (bu.)						60	50	40	35	45	40		60	50													50	5.5	50
nued).	Irrigation	Grain Sorghum (bu.)						107.30	93.30	74.70	65.30	93.30	84.00		116.70	93.30													102.70	102.70	93.30
Soil Mapping Unit in Crosby County (continued).		Cotton (lbs.)	-					850	780	850	700	750	500		850	750													1000	006	750
n Crosby Co		Range (AUM)	.73	.73	.73	.73	.73	.58	.58	.51	.51	.56	.56	.25	.51	.51	.70	.70	.37	.88	.88	.88	.88	.88	.51	.51	.51	.51	. 73	.66	• 66
ping Unit i	Hev or	Pasture (tons)	2.9	2.9	2.9	2.9	2.9	2.5	2.5	2.9 .	2.9	2.5	2.5		2.5	2.5	3.4	3.4		2.1	2.5	2.5	2.5	2.5			1.7		3.4	2.5	ć. 2
Soil Map		Wheat (bu.)	15		20	20	15	1 6	14	14	14	14	12		15	12	20	20		20	20	20	15	15					18	20 	9T
elds for Each	Grain	Sorghum (bu.)	23.33		28.00	23.33	18.67	18.67	14.00	20.00	17.50	15.83			18.67	14.00	28.33	25.00		23.33	23.33	23.33	23.33	23.33					23.33	23.33	18.6/
Crop Yields		Cotton (lbs.)	250		300	250	200	200	175	180	160	190	180		200	150	300	300		225	225	225	200	200					250	225	200
Table 4.		Soil	MM03	MM35	IONM	MN13	MN 35	OT01	0T13	PF01	PF13	PM01	PM13	PTSS	PU01	PU13	RLCY	RFSL	RHBL	SYAL	SCYL	SFSL	SM13	ST01	TVFS	VTCX	VC13	V315	ZF01	ZM01	£TW2

A high level of management and input quality was assumed for this study to make the comparison between the conventional straight row cultivation practice and the limited till or terracing practices as realistic as possible. A higher level of management is necessary to successfully use limited tillage or terracing and thus it would not be a fair comparison if they were compared to a conventional system with a lower level, more typical management.

The higher level of management would include a greater use of fertilizer, insecticides and pesticides, and better seed varieties for row crops. On pasture or range land cross fencing and rotational grazing would be utilized along with improved grass species, brush control on rangeland and careful adjustment of livestock numbers as necessary to make the best use of the available grass. The yield data were furnished by USDA Soil Conservation Service and Texas Agricultural Extension Service personnel familiar with the area.

Crop Prices and Production Costs

Expected prices were defined as the average price received by Texas farmers for the specified crop between 1958-1976 adjusted to 1977 dollars by the index of prices paid for production items. A twenty year price series was used in order to arrive at as stable a set of long run price relationships as possible while at the same time tying prices to production costs.

Table 5 lists the production cost data. This production cost information was developed from a set of 1977 crop budgets for the

urop	costs (\$/acre)	Costs (\$/acre)	Costs (\$/acre)	Price Per Unit (\$)	Machinery and Labor Costs <u>b</u> /
Dryland					
Cotton Grain	57.61	24.75	18.59	00.52/1b. lint 00.05/1b. seed	38.37
_	25.95	8,50	8.80	3.65/cwt.	18.28
Wheat, Small Grains	29.84	9.20	8.21	3.36/bu. 14.73/AUM	22.68
Hay or Pasture	26.31	66.73	9.48	45.00/ton	15.83
Range	2.28		4.27	14.73/AUM	.31
Irrigated					
Cotton	143.46	60.50	32.77	00.52/lb. lint 00.05/lb. seed	96.46
Grain Sorghum	87.41	20.80	37.65	3.65/cwt.	66.55
Wheat, Small Grains	89.93	13.00	22.72	3.36/bu. 14.73/AUM	57.71

Table 5. Crop Production Cost and Input Data. $\frac{a}{}$

High Plains Land Resource Area prepared by the Texas Agricultural Extension Service. Basic cost data was modified to fit each soil mapping unit as part of the computer simulation. These modifications included: (a) changing harvest costs proportional to yield for that crop for each rotation; and (b) adding appropriate costs of specified conservation practices. As yield is reduced due to effects of soil erosion, harvest cost per acre is proportionally reduced but preharvest costs and equipment costs remain constant.

Four cultural practices were considered in this study. The first is conventional straight row cultivation (denoted "SR" in the tables). This practice was used as the standard method on which production cost and yield data was based.

A second cultural practice, which is gaining popularity in this area, called limited or conservation tillage (denoted "C" in the tables), was selected to demonstrate possible savings over time due to reduced machinery and labor usage. For purposes of this study, soil loss due to this cultural practice were assumed to be equal to the soil loss under straight row cultivation. Differences were restricted to production cost savings pertaining principally to use of labor and machinery in field preparation and cultivation. Based on some preliminary studies done at the Texas Agricultural Experiment Station, Bushland, Texas by Allen, Musick and Wiese and by the Perry Foundation in the Rio Grande Valley a ten percent reduction in preharvest machinery and labor costs were assumed for this cultural practice.

Two cultural practices that include contouring and terraces were also considered. Standard terraces (denoted in the tables as "ST"), were defined as terraces that are built from both the front and the back sides and follow the contour of the land without involving substantial cutting and filling. It was assumed that standard terraces could be built for seven cents per linear foot and would have a life expectancy of 10 years. After 10 years, the terrace would have to be rebuilt at a cost of five cents per linear foot.

Parallel terraces (denoted "PT" in the tables) are defined as terraces built from the back side with at least one-third of the terrace interval smoothed and floated in. This not only reduces the slope length but also, partially reduces the steepness of the slope by leveling the interval to some extent. Thus parallel terracing results in a lower Universal Soil Loss Equation "LS" value than standard terraces. Cutting and filling is involved so the contour of the land is not necessarily adhered to exactly. Parallel terraces were assumed to cost twenty-five cents per linear foot to build. Their life expectancy was set at 15 years after which they would have to be rebuilt at a cost of ten cents per linear foot.

The steepness of the slope as well as the type of crop grown affects the number of linear feet of terrace needed per acre. The steeper the slope the narrower the terrace interval must be to be effective. Also the terrace spacing must be closer for row crops than for close grown crops. These cost considerations were combined to arrive at the terrace construction costs listed by soil mapping

units in table 6.

To calculate the production cost of crop rotations grown on terraced soils for each year, the base cost for that year was increased by the discounted sum of the initial construction cost plus the cost of rebuilding the terrace as necessary plus an increase in preharvest machinery and labor costs of 15 percent for standard terraces or 10 percent for parallel terraces. Machinery and labor costs were increased to cover the cost of added field time necessary to farm with the contour of the terraces and to deal with point rows and corners created with standard terraces.

Since terrace construction reduces the speed of runoff, more rainfall has time to soak into the soil. Therefore, the average yield for the various crops was increased 3 percent on land with standard terraces. The expected yield on parallel terraced fields was increased 5 percent as parallel terracing not only traps more runoff but tends to distribute it better over the terraced interval. These yield increases are considered conservative.

Crop Rotations

Crop rotations rather than continuous single crops were considered in this study for two reasons. One reason is that the previous crop influences the amount of erosion from the current crop, and the average erosion rate for a rotation is not a simple average of the erosion rates of the same crops grown continuously. The second reason that rotations were considered is that the yield of some crops will be higher (or lower) when grown in rotation with

	Average	Yield			UCTION COSTS	
a . 1	Topsoil	Loss	Standard		Parallel Ter	
Soil	Thickness		Close Grown	Row	Close Grown	Row
	(in)	(fig. 2)	Crops	Crops	Crops	Crops (\$/acre)
			(\$/acre)	(\$/acre)	(\$/acre)	(\$/acre)
AB01	8	В	10.16	12.19	34.85	41.81
AB13	6	в	17.42	20.33	59.74	69.70 41.81
AF01	11	В	10.16	12.19	34.85 59.74	69.70
AF13	9	В	17.42	20.33 12.19	34.85	41.81
AM03	15 2	B C	10.16 33.14	36.74	113.64	125.95
BDLD BF13	10	c	17.42	20.33	59.74	69.70
BF35	7	c	26.98	30.49	92.52	104.54
BF58	5	č	33.14	36.74	113.64	125.95
BM35	7	č	26.98	30.49	92.52	104.54
BM58	5	č	33.14	36.74	113.64	125.95
BDFS	22	В	17.42	20.33	59.74	69.70
BSSE	2	A	17.42	20.33	59.74	69.70
BT13	8	¢	17.42	20.33	59.74	69.70
DC13	10	с	17.42	20.33	59.74	69.70
DC35	8	C	26.98	30.49	92.52	104.54
HYGL	2	A	33.14	36.74	113.64 104.54	116.16
LLFS	10	c	30.49 10.16	33.88 12.19	34.85	41.81
LYAL	15	C B	10.16	12.19	34.85	41.81
LNCL	7 7	B	10.16	12.19	34.85	41.81
LFSL MAO1	8	В	10.16	12.19	34.85	41.81
MADI MA13	7	В	17.42	20.33	59.74	69.70
MA35	6	B	26.98	30.49	92.52	104.54
MK01	8	в	10,16	12.19	34.85	41.8
MK13	6	В	17.42	20.33	59.74	69.70
MK.35	5	в	26.98	30.49	92.52	104.54
MPCX	6	A	22.92	26.06	78.60 59.74	69.70
MMO3	12	В	17.42	20.33 30.49	92.52	104.54
MM35	8	B B	26.98 10.16	12.19	34.85	41.8
MNO1	8 7	в В	17.42	20.33	59.74	69.7
MN 13 MN 35	5	B	26.98	30.49	92.52	104.5
OT01	8	B	10.16	12.19	34.85	41.8
0T13	6	B	17.42	20.33	59.74	69.7
PF01	14	В	10.16	12,19	34.85	41.8
PF13	10	В	17.42	20.33	59.74	69.7
PM01	12	В	10.16	12.19	34.85	41.8
PM13	10	В	17.42	20.33	59.74	69.7 116.1
PTSS	8	A	30.49	33.88	104.54 34.85	41.8
PU01	7	В	10.16	12.19	59.74	69.7
PU13	5	B	17.42	20.33 12.19	34.85	41.8
RLCY	25	C	10.16 10.16	12.19	34.85	41.8
RFSL	25	B A	33.14	36.74	113.64	125.9
RHBL SYAL	4 12	C	10.16	12.19	34.85	41.8
	12	c	10.16	12.19	34.85	41.8
SCYL SFSL	. 17	c	10.16	12.19	34.85	41.8
SFSL SM13	7	č	17.42	20.33	59.74	69.7
ST01	6	č	10.16	12.19	34.85	41.8
TVFS	10	С	33.14	36.74	113.64	125.9
VTCX	4	Ā	33.14	36.74	113.64	125.9
VC13	6	A	17.42	20,33	59.74	69.7
V315	4	A	22.92	26.06	78.60	89.3
ZF01	14	В	10.16	12.19	34.85	41.8
ZMOl	12	В	10.16	12.19	34.85	41.8 69.7
ZM13	10	В	17.42	20.33	59.74	07./

Table 6. Terracing Costs, Average Topsoil Thickness and Yield Loss Equation by Soil Mapping Unit.

.

another crop, or crops.

Table 7 lists the crop rotations that were considered and the vield changes assumed for the cropping combinations. The yield reduction of crops grown in continuous cultivation rather than as part of a crop rotation was based on research conducted at the Texas Research Foundation, Renner, Texas in the 1950's and early 1960's and on the opinion of experienced agronomists familiar with the area. The yield of cotton grown continuously was reduced twentythree percent as the crop budget and yield information on cotton was given for cotton in rotation with grain sorghum and small grains. Continuous cotton would not benefit from the plant nutrient carryover or organic residue left by the small grain crop in a rotation or from the cotton pest control and disease reduction provided with sorghum in the rotation. Thus over time expected cotton yields would be less. Cotton grown in rotation with sorghum was penalized five percent due to the fact that while sorghum would provide some opportunity for pest management and some fertility carryover, it would not be as great as the carryover with small grains in the rotation. The yield of cotton in a three-year rotation was not decreased. Sorghum yields were decreased two percent in two year rotations and twelve percent in continuous cultivation. This yield decrease is attributable to the lack of Johnsongrass control and fertility carryover in continuous cultivation.

Soil Loss Factors

The Universal Soil Loss Equation was used to calculate average soil loss per acre for each soil series -- crop rotation -- conservation

Cropping System and Yield Change <u>a</u> /	Table Abbreviation	"C" Factor
Cotton (-23)	С	.65
Grain Sorghum (-12)	S	.50
Wheat (-9)	W	.15
Hay or Pasture	P/H	.02
Range	R	.03
Cotton (-5)/Sorghum (-2)	c/s	.55
Cotton (-5)/Wheat	C/W	.40
Sorghum (-2)/Wheat	s/w	,25
Cotton/Sorghum/Wheat	c/s/w	.35

Table 7.	Crop Rotations Considered in the Analysis, Associated USLE
	"C" Factors and Percent Reduction in Yield Under Continu-
	ous Cultivation Rather than in Rotation.

 $\frac{a}{Y}$ Yield change is equal to the percent change in yield for each crop in the cropping system compared to the yield listed for that crop in table 4.

practice combination in the watershed. This equation is:

$$A = RK(LS)CP$$

where A is gross erosion in tons per acre, R is a rainfall erosivity index, K is a soil-erodibility factor, LS is a topographic factor that represents the combined effects of slope length and steepness, C is a cover and management factor, and P is a conservation practice factor. Values for all of these factors were furnished by the Soil Conservation Service and are reported in tables 7 and 8. It should be noted that the LS value does not represent an average value for the soil mapping unit. Rather it is a value assigned to a specific slope length and slope percent. These specific slope characteristics can commonly be found for that soil mapping unit. Also shown in table 8 are the erosion tolerance limits, or "T" values, that have been established for each soil. Theoretically, if erosion is less than this T value, little or no yield reduction results from the soil loss.

Table 9 shows estimated per acre erosion rates for each soil series -- conservation practice -- crop rotation combination considered in the study.

An overview of data in table 9 leads to several general conclusions about the soil loss problems in Crosby County. It is quickly apparent that most soils have only a low to moderate potential for soil loss, with the major crop of concern being cotton. A few soil mapping units, for example Rough Broken Land or Hilly Gravelly

			USLE Fa	ctors		
Soil	K	LS Without Terraces	LS With Standard Terraces	LS With Parallel Terraces	P Contour- Terracing	T (Ton/ Ac/Yr
AB01	. 32	.16	.16	.16	.6	5
AB13	. 32	.24	.15	.12	.6	5
AF01	. 32	.16	.15	.15	.6	5
AF13	. 32	.16	.15	.15	.6	5
AM03	. 32	.27	.16	.12	•6	5
BDLD	. 32	.62	.62	.62	1.0	2
BF13 BF35	.24	.23	.22	.22	.6	5
BF58	.24 .24	.48	.40	. 37	.5	5 2 5 5 5 5 5 5 5 5
BM35	.24	1.00	1.00	1.00	1.0	5
BM58	.37	1.00	.52	.52	1.0	5
BDFS	.24	.22	1.00	1.00	1.0	5
BSSE	.24	.22	.22	.22	1.0 1.0	2
BT13	.28	.18	.16	.22	.6	5
DC13	.28	.23	.22	.22	.6	5 5 5
DC35	.28	.81	.81	.81	1.0	5
HYGL	.10	4.10	4.10	4.10	1.0	4
LLFS	.15	. 45	.45	.45	1.0	
LYAL	.28	.05	.05	.05	1.0	5 5
LNCL	. 32	.09	.09	.09	1.0	5
LFSL	. 32	.07	.07	.07	1.0	5
MA01	.28	•09	.09	.09	.6	3
MA13	.28	.24	.22	.21	.6	3 3
MA 35	.28	. 47	.47	. 47	1.0	3
MK01	.28	.14	.14	.14	.6	3
MK13	.28	.24	.24	.24	•6	3
MK35 MPCX	.28 .28	.52	.40	. 36	.5	3 3 3 3 5 5
MMO3	.28	.46	.46	. 46	1.0	3
MM35	.20	.35	.24 .35	.24	.6	5
MN01	.32	.13	.13	.35 .13	1.0	5
MN13	. 32	.24	.24	.24	.6	5
MN 35	. 32	. 52	.52	.52	1.0	5
0701	. 32	.13	.13	.13	.6	5
JT13	. 32	.20	.20	.20	.6	5
PF01	.37	.12	.12	.12	.6	5 5 5 5 5
PF13	. 37	.24	.24	.24	.6	5
PM01	. 32	.13	.13	.13	.6	5
PM13	. 32	.21	.21	.21	.6	5
PTSS	.28	.62	.62	.62	1.0	1
2001	.37	.12	.12	.12	.6	5
2013	.37	.20	.20	.20	.6	5
STCA	. 32	.13	.13	.13	1.0	5
USL	. 32	.14	.14	.14	.6	5 5
RHBL	.28	4.10	4.10	4.10	1.0	3
SYAL	.17	.14	.14	.14	1.0	3 5
SCYL	.28	.16	.14	.13	•6	5
SFSL	.24	.13	.13	.13	.6	5
SM13	. 32	.20	.18	.17	.6	4
TO1	.32	.12	.12	.12	.6	4
TCX	.17	2,30	2.30	2.30	1.0	5
C13	.32 .32	.93	.93	.93	1.0	2
315	. 32	•27 1 40	.27	.27	1.0	2
F01	• 32	1.40 .14	1.40 .14	1.40	1.0	2
MOL	. 32	.14	.14 .14	.14	.6	4
MI 3	. 32	.14	.14	.14 .14	•6	4
		• /	به.	• 14	.6	4

Table 8. USLE Factors by Soil Mapping Unit for Crosby County.

.

TABLE 9. EXPECTED SOIL LCSS (TENS/ACRE/YEAR) FOR EACH CROP ROTATION. SOIL MAPPING UNIT, AND CULTURAL PRACTICE.

	đ	COTTON	SORGHUN	WHEAT	H/d	RANGE	c/s	¥/0	* ` S	C/S/N
0	SR	4.33		1.00	0•13	0• 20	3.66	2.66	1.66	2•33
) 			1	I	1	1	•	(l	
AB13	a S R	6.49	4,99	1 • 50	0.20	00 90	5.49	66 • E	2.00	0 4 9
		4	φ •	ທ •	•	•	Ö •	ດ •	ф.	ו (יין •
	РŢ	6	٠	4	•	ò.	•	• ₽	•	ė.
A E O 1	a v	۲. ۱	(***	•	-	Ň	ن •	•	Ŭ.	m •
>	() d	ά	E LC			Ö	ц С	Ő	10 •
		2•38		0.55	0 • 07	0.11	2.01	1.46	0+92	1.28
0 E 1 3	đ	IT.	17	C	-	N	9	Ŭ.	Ŷ	ini •
•	, F		ά	in I			Ö	1.50	0 - 54	1.31
	ь Г	2.38	1.03	0.55	0+07	0.11	2.01	4	տ •	N.
5 UM 0	å	- M.	ي. •	- C •	<u>م</u>	- m		4	00 •	б •
	: F	×	C		0	-	N •	9 •	•	1.40
	рd Т	2.00		0.46	0.06	60.0	1.69	1.23	0.77	0
BDLD	SR	16.76	12.50	3•87	0.52	0+77	14.19	10+32	6.45	£0•5
RF13	а С	Ŭ.	i) •	•	, ,	N N	о •	α •	Ň	្ទុំ
•	s Fo			0	•	0.12	2.27	1.65	1 • 03	1.44
	P1	2.64	0.0	0.61	0.08	-	∾	•	•	4
8F 35	a V	- M-	4	(V) •	10 •	ः •	¢.	Ö.	~	Ň
)	S L S	0		0.94	0.12	0.19	3.43	2.50	1.56	2.18
	L d	3.79	2.51	ίΩ ●	•	-	ې ۹	™ ●	4	Ŏ.
8F58	SR	20.28	15.60	4.68	0•62	0•94	17.16	12.48	7.80	10.92
8M35	SR	16•26	12.51	3.75	0•50	0.75	13•76	10.00	6+25	8.75
8 M 5 8	SR	31 • 26	24.05	7.21	0•96	1+44	26.45	19.24	12+02	16.83
ADF S	С С	4-46	6 6 6	1-03	0.14	0-21	3.78	2.75	1.72	2.40

(CONTINUED). Expected Soil LCSS (TONS/ACRE/YEAR) FOR EACH CROP RGTATION. Soil Mapping Unit, and cultural practice. • TABLE

SOIL	с С	COTTON	SORGHUM	WHEAT	H/4	RANGE	c/s	M/U	SIN	C/S/#
BSSE	SR	4.46	9 . 4∃	1.03	0+14	0.21	3•78	2+75	1.72	2.40
BT13	SR	_ ∾ ●		ა •	•	୍ ରା •	ÿ ●	•	¢ ●	°. ∎
	PS T	2•27 2•18	1.75	00 00 00 00	0.07	•00	1 92 1 84		0.84	1.17
•	(4	•	Ċ	v	¢	4	P	ç	đ
0013	x H N M		4 0 4 0 7 0 7 0	0 • 4 0	0.10	90 94 94	0 • • •	0 0 0 0 0 0 0	1 • 20	1.468
	ЪТ Т	0	in) ∎	•	0	-	•	• 00		ÿ.
0C35	SR	19,16	14.74	4 • 42	0.59	0•88	16.22	11+79	7.37	10.32
нүсг	SR	34.64	26.65	65 * 2	1+07	1.60	29+31	21+32	1 3 1 3	18.65
LLFS	sя	5.70	4 .39	1.32	0.18	0•26	4.83	3+51	2.19	3+07
LYAL	SR	1.18	0.51	0.27	0+04	0• 05	1 • 00	0+73	0+45	0•64
LNCL	ЗR	2.43	1.87	0+56	0•07	0+11	2006	1.50	0•54	1•31
LFSL	SR	1.89	1.46	0.44	0•06	60°0	1.60	1.16	0+73	1•02
MAOI	SR	2.13	1.64	0.49	0.07	0.10	1.80	1.31	0.82	1.15
e i dm	С С	÷	(م) ا	- M1 	•	_∩ ●	00 •	4	•	°.
	ST:	3+12	2.40	0.72	0.10	0.14	2.64	1.92	1.20	1 • 68
	Ь	0	in) •	₩. •	•	-	ິ •	0 •	•	¢
MA 35	SR	11+12	ង ភូមិ ភូមិ ភូមិ ភូមិ ភូមិ ភូមិ ភូមិ ភូមិ	2+57	0=34	0.51	9•41	6 . 84	4 •28	5 • 33
MK01	SR	3,31	ар 9 9 9 10 9	0.76	0.10	0.15	2.80	2•04	1.27	1.78
MK 1 3	ŝ	5.62	4.37	1-31	0-17	0.26	4.80	3.49	2.18	3.06

TABLE 9.	(CONTINUED).	TTONS/ACDE/VEAD) FOD FACH (PAD POTATION.
	SOIL MAPPING UNIT.	SOIL MAPPING UNIT. AND CULTURAL PRACTICE.

SOIL	сЪ	COTTON	SORGHUN	WHEAT	Н/Ч	RANGE	C/S	×	S/W	C/S/W
MK 30	se	m	4	α •	M	່ ເອ	4	7.57	4.73	6.62
•	ST.	4	Ų.	1.09	0.15	0.22	4.00	ሳ •	Ø	ິ. •
	PT-	4.26	9 9 9 9	•	-	N.	•	\$ •	Ú.	Ň.
MPCX	SR	10.88	8.37	2+61	0+33	0.50	9.21	6.70	4.19	5. 86 5
MM03	SR	4.06	3.12	0• 54	0.12	0•19	3.43	2+50	1.56	2.18
MM35	SR	5+91	4 . 55	1.36	0.18	0.27	5.00	3 • 64	2.27	3.18
1 ONM	SR	3.52	2.70	0.81	0.11	0•16	2+97	2+16	1•35	1•89
MN13	SR	6.49	4.99	1.50	0+20	0• 30	5.49	3+ 99	2.50	3+49
	SR	14.06	10.82	3 •24	0.43	0.65	11 • 90	8•65	5.41	7.57
0101	SR	3+52	2.70	0.81	0.11	0.16	2.97	2.16	1.35	1•89
0113	SR	5+41	4 . 16	1.25	0•17	0.25	4.58	3+33	2.08	2•91
PF 01	SR	3+75	2•85	0.87	0.12	0.17	3.17	2.31	1.44	2•05
PF13	SR	7.50	5.77	1+73	0.23	0•35	6.35	4•62	2•89	4•04
PM01	SR	3.52	2.70	0.81	0.11	0.16	2.97	2.16	1.35	1•89
EIN4	SR	5.68	4.37	1.31	0.17	0.26	4.80	3 4 9	2.18	3•06
PTSS	SR	14+67	11.28	6E • E	0.45	0.68	12.41	6 • 0 3	5.64	7•90
PU01	SR	3+75	2+85	0-87	0.12	0•17	3.17	2• 31	1.44	2002
PU13	SR	6.25	4+81	1.44	0.19	0•29	5.29	3• 82 3	2.40	3+37
	0	C U F	ŗ			2 · •	r C	4 - 0		00

(CONTINUED). EXPECTED SUIL LCSS (TONS/ACRE/YEAR) FOR EACH CROP RCTATION. SOIL MAPPING UNIT. AND CULTURAL PRACTICE. TABLE 9.

SOIL	đ	COTTON	SORGHUN	WHEAT	Н/Ч	RANGE	c/s	3	S/W	C/S/W
RFSL	SR	3.79	2.91	0.87	0.12	0•17	3+20	2•33	1.46	2.04
RHBL	SR	97.01	74.62	22.39	2.98	4.48	82.08	59+70	37.31	52+23
SYAL	SR	2.01	1 • 55	0.46	0•06	0•03	1.70	1.24	0 • 77	1.08
	ł					1	(r	<	ç
SCYL	SR	3.79	ა •	0.87	0.12	0+17	0 0 N V M	າ ເ N		
•	ST:	1.99		4	•	•	•	.√ ●	- r •	
	Ъ.	1.89	4	4	ġ.		•	•	•	>
SF SL	с К	2.64	2003	0.61	0+08	0.12	2.23	1.62	1.01	1.42
; 	1		•	Ċ	*	<u> </u>	۲ د	M	•	• •
SMIG	a s		•	uŭ ●	• <	i ▶ - () 4	Ω.		1.57
	PT PT	9 4 6 4 7 5 4 6 4 7 5 7 7	2 • 1 ¢	0.65	• • •	0.140	2.38	1.73	1.08	Ω ●
ST01	SR	3.24	2•2C	0.75	0.10	0.15	2 • 75	2•00	1.25	1.75
TVFS	ŝ	33 - 04	25.41	7.62	1.02	1.52	27.96	20+33	12.71	17.79
	: 0 0 V	25.15	45.401	5.80	0 • 77	1.16	21.28	15.48	9.67	13.54
	5) 1)			6 H - C	6.18 6	4-49	2-81	50 • 10
VC13	SR	7.30	5.62	•	0 • V V		•	t •	}	,
V315	SR	37.86	29.12	8.74	1.16	1.75	32•03	23+30	14.55	20•38
ZF01	SR	3.79	2.91	0.87	0.12	0•17	3• 20	2.33	1.46	2 04
ZMO1	SR	3•79	2.51	0+87	0+12	0•17	3= 20	2•33	1•46	2•04
r S	í í	(J ~ V	U U	0	-	2	0 0	00 •	~	4
2M13	2 H) 	; Γ () α () -		- 0 - 0	0.11	2.06	1.50	0* 94	1.31
	-) t t () r P) U) C	-	Ö	4	α	-

29

Land seem to have a fairly high potential for soil erosion especially if planted to row crops but these mapping units are almost never used for crop land and hence these potential soil losses are seldom realized. Another general conclusion one can derive from table 9 is that soil loss for any particular soil mapping unit can be reduced by either changing to a close-grown crop or by terracing and contouring. The better way, if soil losses must be reduced, depends on the relative net returns to the two methods. Soil lost any one year does not directly affect that year's net returns to a particular crop rotation at the low levels of soil loss of topsoil does become important because yield of crops grown thereafter is reduced.

Yield Loss Attributal to Erosion

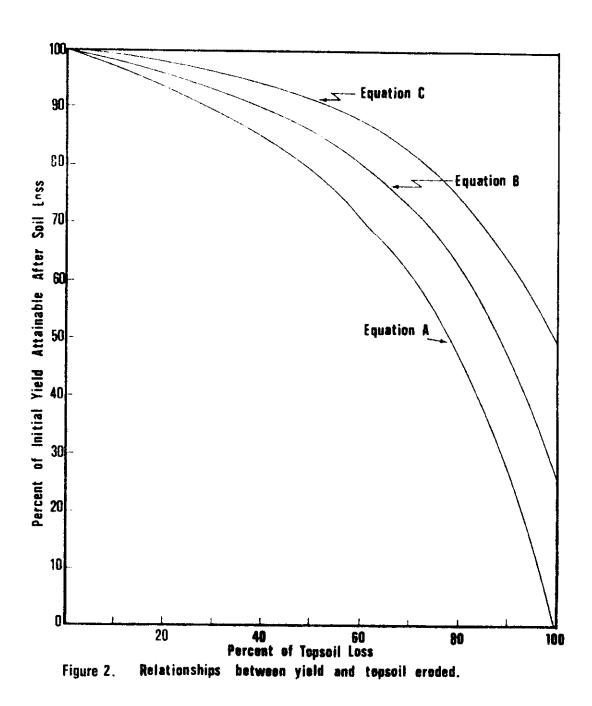
In a long-run analysis of soil conservation, the relationship between erosion and future crop yield is critical. This is because the on-farm benefits from conservation practices arise mainly from the relatively higher future crop yield resulting from that conservation practice. Unfortunately, very little experimental or field data on this important relationship are available. Consequently, for purposes of this study, it was necessary to develop estimates of this relationship for each soil mapping unit.

Yield loss attributal to topsoil loss depends to a certain extent on the suitability of the subsoil for crop production. Soils in the county were classified into one of three groups. Group A consists

of soils that have subsoil that is unsuitable for field crop production. For this group, crop yield was assumed to be zero after all topsoil was eroded. Group B consists of soils with subsoils that are slightly suitable for field crop production. It was assumed that crop yield on Group B soils would be 25 percent of the currently attainable yield after all the topsoil was eroded away. Group C consists of those soils with subsoils that are somewhat more suitable for crop production. After the loss of all topsoil, yield in this group was assumed to be 50 percent of present yield. The group to which each soil belongs and initial average topsoil depth for each soil is shown in table 6.

Due to paucity of experimental or field data on the relationship between topsoil thickness and yield, it was necessary to subjectively specify this relationship for each soil group. After considerable discussion with Soil Conservation Service and Texas A&M University scientists, the three relationships shown in figure 2 were specified. The functions in figure 2 have two important characteristics. One is that each function is expressed in terms of <u>percent</u> of topsoil lost and <u>percent</u> of initial yield attainable after erosion. This reflects the fact that the loss of one inch on an initially shallow soil will decrease yield more than the loss of one inch of an initially deep soil. For example, the loss of one inch of a soil in Group A with an initial depth of 20 inches will reduce yield by about 2 percent, while the loss of one inch on a soil with an initial depth of 5 inches will decrease yield by about 8 percent.

The second important characteristic of the functions in figure 2 is that the loss of the last remaining topsoil will reduce yield by



more than the loss of the upper portions of initial topsoil. For instance, the loss of the first 20 percent of topsoil in Group A will reduce yield by about 8 percent, while the loss of the last 20 percent of topsoil will reduce yield by about 46 percent. Because of the critical nature of the relationships shown in figure 2, additional experimental and field research appears warranted.

In determining effects of erosion on yield, the bulk density of soil is important. Since erosion typically occurs when the soil is saturated with water, the bulk density of wet soil was used. Based on unpublished field data, a bulk density of 200 tons per acre inch was used for all soils in Crosby County except the clay soils. A bulk density of 180 tons per acre inch was used for the clay soils; Randall clay and Stamford clay.

Profitability of Conservation Practices

Profitability information for the various crop rotation -- conservation practice combinations for each soil in Crosby County is given in Appendix A, tables 12 through 68. All figures are based on assumptions previously stated. All on-farm costs associated with terracing are included when their profitability is calculated, but there is no Federal cost-sharing for terrace construction added in nor is there any cost charged for sediment leaving fields.

As an illustration of information given in these tables, consider table 13 which gives data for Abilene clay loam on 1-3 percent slopes.

The first column of this table gives the crop rotations considered for this soil, while the second column lists the conservation practice. Column 3 gives the estimated percent of topsoil lost annually for each respective crop rotation -- conservation practice combination. In column 4 expected per acre return to land and management in year 1 is given. The next block of columns gives annual yield as a percent of initial yield, and expected profit for years 10, 100, and 200. The final block of columns gives the present value of a profit stream to year 10, 100 and 200.

As a specific example consider continuous cotton on Abilene clay loam with 1-3 percent slope (table 13). Given the assumed initial topsoil thickness of 6 inches (table 6), with straight row or limited till cultivation, .542 percent of the topsoil would be lost annually. If terraces are constructed the yearly percentage loss in topsoil thickness is reduced to .203 percent with standard terraces or .163 percent if parallel terraces are constructed.

The profit from continuous cotton would be \$24.25 the first year with straight row tillage. This profit would get progressively less as the topsoil was lost and yield decreased so that by the 200th year, profit with straight row tillage would have dropped to -\$50.96. Yield losses due to topsoil erosion remains the same with limited tillage methods but the reduced use of machinery and labor results in higher profits for any one year. The use of terraces cut yearly topsoil losses by more than one-half resulting in higher yields for future years. In the long run, one-hundred years or more, these higher yields result in higher returns to land and management. On

the other hand, higher costs associated with terrace construction and maintenance causes short-run returns to be less than without terraces despite the yield differences. Thus, growing continuous cotton on Abilene clay loam (table 13) causes sufficient topsoil erosion to reduce yields in the 100th year to 81.2 percent of initial yield if straight row or conservative tillage cultivation is employed. A yield reduction of this magnitude causes the yearly return to land and management to be \$5.80 for straight row cultivation and \$9.63 for conservation tillage, but the present value of the profit stream to year 100 for these methods of cultivation would be \$959 and \$1163, respectively. If standard terraces were constructed, the yield would only be reduced to 93.8 percent in the 100th year and a return of \$13.86 per acre would be expected. However, the present value of the profit stream to year 100 with standard terraces would be only \$927 -- less than that under either straight row or conservation till cultivation. The present value of the topsoil saving terracing systems does not become larger than that of the nonterracing methods until well past 100 years.

Many of the soils in Crosby County are too flat for contouring and terracing to have any effect on the rate of soil loss. For these soils only the straight row and conservation till cultivation practices are listed. Also, only appropriate crops for a given soil are listed. Thus, a few soil mapping units such as Berthoud fine sandy loam, 5-8 percent slopes (table 20) have no field crop options and are listed only for completeness.

Twenty soil mapping units have potential for irrigation. Expected yields for crops under irrigation are listed as part of table 4. On these soils profit and yield information is also given for irrigated rotations as it is for example in table 14.

Information in tables 12 through 68 can be used to compare profitability of the four cultural practices for a particular crop or profitability of various crop rotation -- cultural practices for each soil mapping unit, given a planning horizon of 10, 100, or 200 years. Table 10 lists the cultural practice with the highest present value of profit for a 200 year planning horizon for every crop rotation on each soil mapping unit in the county. Only the 200 year planning horizon is shown because there was very little difference over the various time horizons and the information is available within tables 12 through 68. Contents of table 10 indicate that very little terracing is profitable in Crosby County unless government cost-sharing programs are involved. Typical fields from which soil mapping unit data in this study was taken were simply too flat to pay for expensive terrace construction if only profit lost due to yield reduction is considered.

Naturally this does not mean that there are no fields in the county that can be profitably terraced. There may be many areas that are steeper or have longer slopes than the typical just as there may be many farmers who have different costs of production and expected yields.

Table 11 lists the most profitable crop rotation -- cultural prac-

Soil				Crop	Rotation	1			
	С	S	W	Р/Н	c/s	C/W	s/w	C/S/W	
AB01	С	С	С	SR	c	С	С	С	
AB13	PT	С	С	SR	\tilde{PT}	PT	c	PT	
AF01	С	С	Ċ	SR	Ċ	Ċ	C	C	
IRR	РТ	С	Ċ	Dit	PT	U	U	PT	
AF13	С	С	č	SR	Ĉ	С	С	C	
IRR	С	С	Ċ		C	v	U U	C	
AM03	С	С	Ċ	\mathbf{PT}	č	С	С	C	
BDLD	_	_	_	_	-	-			
BF13	С	С	С	SR	С	C	c	-	
BF35	С	С	Ċ	SR	C	C	C	C	
BF58	-	_	-	-	-	C _	- -	C	
BM35	С	С	С	SR	C	c	c	-	
BM58	-	_	_	-	-	-	U	C	
BDFS	_	_	_	SR	_	_	-	-	
BSSE	_	_	_	SR	_	-	-		
BT13	С	С	С	SR	c	- C	-	-	
DC13	-	č	c	SR	c	C C	C	C	
DC35	-	-	_	SR	C C	L.	С	С	
HYGL	-	_	_	-	-		-	-	
LLFS	_	_	_		-	-	-	-	
LYAL	_	_	_	SR.	-	-	-	_	
LNCL	С	С	c	SR	_	-	-	-	
IRR	C	C	C	SK	C	С	С	C	
LFSL	C	C	c	SR	C	0	-	C	
IRR	c	c	C	5K	C	С	С	С	
MA01	C	C	C	SR	C	a	~	С	
IRR	C	c	C	SK	C	C	С	C	
MA13	C	C	c	SR	C	<u>^</u>		С	
IRR	C	C	c	SK	C	C	С	С	
MA35	-	-	-	SR	С			С	
IRR	_	С	C	SK	_	-	-	-	
MK01	С	c	c	CD	C	~	~	С	
IRR	C		C	SR	C	С	С	С	
MK13	C	C C	C	C D	C	~	-	С	
IRR	-	c	C C	SR	C	С	С	C	
MK35	PT	C	C	ĊD	C	~		C	
MPCX		-		SR	PT	С	С	С	
MM03	C	c	c	- SR	-	-	-	-	
MM35	-	-		SR	С	C	С	С	
MN01	C	C	c	SR SR	-	-	-	-	
	U	U	U U	лс	С	С	С	С	

Table 10. Most Profitable Conservation Practice by Soil Mapping Unit and Crop Rotation with 200 Year Planning Horizon. $\underline{a}/$

Soil				Crop H	Rotation			
	С	S	W	Р/Н	c/s	C/W	s/w	C/S/W
MN13	С	С	С	SR	С	С	С	С
MN 35	С	С	С	SR	С	С	С	С
OT01	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
OT13	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
PF01	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
PF13	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
PM01	С	С	С	SR	С	С	С	С
IRR	С	С	C		С			С
PM13	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
PTSS	-	-	-	-	-	-	-	-
PU01	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
PU13	С	С	С	SR.	С	С	С	С
IRR	С	С	С		С			С
RLCY	С	С	С	SR	С	С	С	С
RFSL	С	С	С	SR	С	С	С	С
RHBL		-	-	-	-	-	-	-
SYAL	С	С	С	SR	С	С	С	С
SCYL	С	С	С	SR	С	С	С	С
SFSL	С	С	С	SR	С	С	С	С
SM13	С	С	С	SR	С	С	С	С
ST01	С	С	С	SR	С	С	С	С
TVFS	-	-		-	-	-	-	
VTCX	-	-		_		-	-	-
VC13	-	-	-	SR	-	-	-	_
V31 5	-	-	-	-	-	-	-	-
ZF01	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
ZM01	С	С	С	SR	С	С	С	С
IRR	С	С	С		С			С
ZM13	С	С	С	SR	С	С	С	C
IRR	С	С	С		С			C

Table 10. Most Profitable Conservation Practices by Soil Mapping Unit and Crop Rotation with 200 Year Planning Horizon $\underline{a}/(\text{continued})$.

 $\frac{a}{SR}$ denotes conventional straight row cultivation practices, C denotes conservation tillage, PT denotes parallel terracing.

		P1a	anning Hori			
Soil	10 Ye		100 1	lears	200 3	lears
5011	Rotation	Cultural Practice	Rotation	Cultural Practice	Rotation	Cultural Practice
AB01	C/W	С	W	С	W	С
AB13	C/W	С	W	С	W	С
AF01	C/W	С	c/W	С	C/W	С
IRR	С	С	С	\mathbf{PT}	С	\mathbf{PT}
AF13	Р/Н	SR	Р/Н	SR	Р/Н	SR
IRR	С	С	С	С	С	С
AMO 3	P/H	SR	P/H	SR	Р/Н	\mathbf{PT}
BDLD			_	-	-	-
BF13	P/H	SR	Р/Н	SR	Р/Н	SR
BF35	P/H	SR	P/H	SR	P/H	SR
BF58	R	SR	R	SR	R	SR
BM35	P/H	SR	P/H	SR	P/H	SR
BM58	R	SR	R	SR	R	SR
BDFS	Р/Н	SR	Р/Н	SR	P/H	SR
BSSE	Р/Н	SR	Р/Н	SR	P/H	SR
BT13	C/W	C	C/W	C	C/W	С
DC13	Р/Н	SR	Р/Н	SR	P/H	SR
DC35	Р/Н	SR	P/H	SR	Р/Н	SR
HYGL	R	SR	R	SR	R	SR
LLFS	R	SR	R	SR	R	SR
LYAL	Р/Н	SR	Р/Н	SR	P/H	SR
LIAL	C/W	C	P/H	SR	Р/Н	SR
IRR	c/s	C	c/s	C	c/s	C
LFSL	Р/Н	SR	P/H	SR	Р/Н	SR
IRR	C/S	C	C/S	C	c/s	C
MA01	С/З Р/Н	SR	Р/Н	SR	9/В Р/Н	SR
MA13	Р/Н	SR	P/H	SR	Р/Н	SR
MA15 MA35	Р/Н	SR	P/H	SR	Р/Н	SR
	P/H	SR	P/H	SR	Р/Н	SR
MK01		SR	P/H	SR	Р/Н	SR
MK13	P/H R	SR	R	SR	R	SR
MPCX			C/W	C	c/w	C
MM03	C/W	C	P/H	SR	Р/Н	SR
MM35	P/H	SR		C	C/W	C
MN01	C/W	C	C/W	C C	C/W C/W	C
MN13	C/W	C	C/W		C/W P/H	SR
MN 35	P/H	SR	P/H	SR	r/H C/W	C
OT01	C/W	C	C/W	C	C/W C/S	C
IRR	C/S	C	C/S	C	С/S Р/Н	SR
OT13	Р/Н	SR	P/H	SR		SK C
IRR	c/s	С	c/s	С	c/s	L

Table 11.	Crop Rotation - Cultural Practice Combinations with High-
	est Present Value for Planning Horizons of 10, 100, and
	200 years for Each Soil Mapping Unit.

-

		P1 a	anning Hor	izon		
Soil	10 Y			Years	200	Years
5011	Rotation	Cultural Practice	Rotation	Cultural Practice	Rotation	Cultural Practice
PF01	P/H	SR	Р/Н	SR	Р/Н	SR
IRR	С	С	С	С	C	С
PF13	P/H	SR	P/H	SR	P/H	SR
IRR	С	С	C	С	C	С
PM01	Р/Н	SR	P/H	SR	P/H	SR
IRR	C/S	С	C/S	С	c/s	С
PM13	P/H	SR	P/H	SR	P/H	SR
IRR	C/S/W	С	C/S/W	Ċ	C/S/W	С
PTSS	_	-	_	_	_	
PU01	C/W	С	C/W	С	C/W	С
IRR	c/s	С	C/S	С	c/s	С
PU13	Р/Н	SR	P/H	SR	P/H	SR
IRR	c/s	С	c/s	С	C/S/W	С
RLCY	C/W	С	C/W	C	C/W	Ċ
RFSL	C/W	C	C/W	Ċ	C/W	C
RHBL	- -	_	_	-	_	_
SYAL	C/W	С	C/W	С	C/W	С
SCYL	C/W	C	C/W	č	C/W	C
SFSL	C/W	С	C/W	C	C/W	C
SM13	C/W	C	C/W	C	C/W	Ċ
ST01	C/W	č	C/W	č	C/W	Ċ
TVFS	R	SR	R	SR	R	SR
VTCX	R	SR	R	SR	R	SR
VC13	R	SR	R	SR	R	SR
V315	R	SR	R	SR	R	SR
ZF01	C/W	С	C/W	C	P/H	SR
IRR	C	Ċ	C	Ċ	C	С
ZM01	C∕W	č	C∕₩	č	C∕₩	č
IRR	C	č	C	č	C	C
ZM13	c/w	c	C∕₩	Č	C∕₩	č
IRR	c/s	č	C/S	C	C/S	C

Table 11. Crop Rotation - Cultural Practice Combinations with Highest Present Value for Planning Horizons of 10, 100, and 200 Years for Each Soil Mapping Unit (continued). tice combination for each soil mapping unit for each of the three planning horizons considered. A cotton-wheat rotation is the preferred dryland crop rotation on most of the soils that will support crop production. This is apparently due to the high profitability associated with cotton combined with yield conserving properties of wheat. Many of the soil mapping units, particularly those which are highly susceptible to soil erosion are confined to native rangeland or permanent pasture.

All the soil mapping units which can be profitably irrigated show their highest present value with continuous cotton or a rotation which includes cotton. The large yield increases that are possible with irrigated cotton are the major cause for this shift to continuous cotton in spite of the soil loss and other associated problems.

Cost-Sharing for Terrace Construction Cost

Profitability estimates for conservation practices shown in appendix A, tables 12 through 69, were based on the assumption that farmers would pay the full cost of adopting a conservation practice. The Agricultural Stabilization and Conservation Service presently makes a limited number of payments to farmers for 50 percent of the initial cost of constructing terraces. This type of payment would obviously make terracing a more attractive alternative. To determine if this would make terracing more profitable than contouring or straight-row farming, one can determine the amount of such a payment

by taking 50 percent of the appropriate terrace cost figure in table 6 and add it to the present value figures (tables 12 through 68).

There are only a few instances where 50 percent cost-sharing payments would make terracing profitable where it would not other-wise be profitable. However, the payments may induce farmers to terrace where it is already profitable because such payments greatly ease the initial financial burden associated with constructing terraces. Also since this model must of necessity deal in average conditions, it may be that certain fields could be profitably terraced with the construction assistance even though the average soil mapping unit could not. Therefore, cost sharing for conservation practices may have a greater impact than would be indicated by the profitability calculations shown in tables 12 through 68.

SUMMARY AND CONCLUSIONS

When an attempt is made to model an activity as complex as agricultural production the decisions made at two points in the modeling process are of crucial importance. One is the type and level of inputs to assume and the second is the appropriate mathematical analogues for the major forces shaping those inputs.

The inputs assumed in this model were average long-run cost and price relationships, average yield with high levels of management and average environmental and climatic conditions for this area. These averages were based on historical data and hence imply an assumption of relative stability with the future being a continuation of the past. Another assumption of the model is that the decision-maker is a profit maximizer and always attempts to minimize costs or maximize net returns.

Given the inputs assumed and the overall drive of profit maximization, accuracy of the model's predictions are mainly dependent on three relationships built into the model.

The first is the relationship between climatic conditions and the environment specified by the Universal Soil Loss Equation. Though this equation has been criticized, it is the best available estimator at this time. Nonetheless, the poorer its accuracy the greater is the deviation of predicted soil loss from the actual soil loss that would occur under the given conditions.

The second crucial relationship in the model is that between soil loss and yield change. Since there is no cost associated with soil

loss in the model other than the yield reduction it causes, the topsoil loss -- yield reduction functions are the essential link that places a monetary value on soil erosion. The higher the yield reduction assumed for each unit of soil lost, the greater the value of that soil and hence the more soil conservation is warranted.

The third relationship with major impact on the model results is the discount rate assumed for future profits. The present value of activities such as terracing, which have high present costs but whose benefits occur many years later, are greatly affected by the discount rate. As the discount rate is increased the importance of future returns decrease. Therefore, the lower the discount rate chosen the greater the importance of future returns and hence of profit conserving soil loss reductions.

Given the difficulty of input data accuracy and the variation in output possible by manipulating the key relationships it is clear that the specific numbers reported herein should not be taken literally. Rather they should be viewed as the best estimates possible given the limitations of the model. Nonetheless, it is the opinion of the authors that the results are sufficiently accurate to specify the relative merits of the crop rotation -- cultural practice combinations for controlling soil erosion and enhancing long-run profits.

REFERENCES

- Agricultural Research Service U.S. Department of Agriculture and Office of Research and Development - Environmental Protection Agency. <u>Controls of Water Pollution from Cropland Volume II</u> -An Overview. Washington, D. C. Report No. ARS-H-5-2 or Report No. EPA-600/2-75-026b, June 1976.
- Association of Texas Soil and Water Conservation Districts. <u>Conservation Problems in Texas</u>. Temple, Texas, October 1976.
- Lee, M. T. and K. Guntermann. "A Procedure for Estimating Off-Site Sediment Damage Costs and an Empirical Test." <u>Water Resources</u> <u>Bulletin.</u> Vol. 12, No. 3, June 1976.
- Parker, Cecil A. and Ray W. Sammons. <u>Texas Crop Budgets</u>. Texas Agricultural Extension Service, College Station, Texas, 1977.
- Texas Department of Agriculture and U.S. Department of Agricultural Statistical Reporting Service. <u>Texas County Statistics</u>. Compiled by Texas Crop and Livestock Reporting Service, Austin, Texas, 1970-1976.
- Texas Department of Agriculture and U.S. Department of Agriculture Statistical Reporting Service. <u>Texas Prices Received and Paid by</u> <u>Farmers</u>. Compiled by Texas Crop and Livestock Reporting Service, Austin, Texas, 1958-1970.
- U.S. Congress Public Law 92-500. <u>Water Quality Control Act Amend-</u> ment, 1972.
- U.S. Department of Agriculture Soil Conservation Service. <u>Erosion</u> and <u>Sediment Control Guidelines for Developing Areas in Texas</u>. Temple, Texas, 1976.
- U.S. Department of Agriculture Soil Conservation Service. <u>K and T</u> <u>Factors of the Soils of the South Area</u>. South Technical Service Center, Fort Worth, Texas, 28 October 1975.
- U.S. Department of Agriculture Soil Conservation Service. <u>Soil Survey Crosby County, Texas</u>. U.S. Government Printing Office, Washington, D.C., January 1966.
- Wishmeier, W. H. and D. D. Smith. <u>Predicting Rainfall Erosion Losses</u> from Cropland East of the Rocky Mountains -- Guide for Selection of Practices for Soil and Water Conservation. Agricultural Handbook No. 282, U. S. Government Printing Office, Washington, D.C., 1965.

APPENDIX A

Profit and Yield Information by Soil Mapping Units for 10, 100 and 200 Year Planning Horizons TABLE 12. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES ABOI.

ROT.	СР	PERCENT TOPSOIL LOST/YR	THE VIE AND TH YR 1	LD REMA E YEARL YEA	INING (A Y Return R 10	S A X OF TO LAND YEAR	AND MA	ITIAL Y NAGEMEN YEA	IELD) T FOR R 200	PROFIT 10	NT VALUE Stream 100	TO YEAR 200
υ	с С	0.271	24 35 28 18	98•7 98•7	23•49 27•33	92 • 0 92 • 0	16.69 20.53	81•2 81•2	6° 40 6° 40	222.	1129. 1334.	1300. 1555.
S	а С С	0• 208 0• 208	18,22 20,05	0 9 9 0 0 0 0 0 0 0 0 0 0	17•87 19•70	93•6 93•6	15•06 16•88	87.ª3 87.ª3	11.67 13.50	167. 184.	901. 998.	1081. 1203.
3	ы К С	0•063 0•063	57•69 59•96	999 4	57•50 59•76	97•6 97•6	55•72 57•99	95•8 95•8	54.01 56.28	ମସ ଅପ୍ୟ •	3032. 3153.	3749 . 3899.
H/d	SR	0•008	14.75	99•6	14.74	99.4	14.60	99.1	14.46	137.	783.	973.
α	SR	0.013	3.73	9 0	3+72	99 • 2	3 •68	98 • 8	3•64	9 4 •	198.	245.
c/s	αu	0•229 0•229	35•97 38•80	989 989 99	35•31 38•14	93 • 1 93 • 1	30•02 32•85	ងង សូម សូម សូម	23 • 05 25• 88	930 936	1785. 1936.	2145. 2333
CVM	an R	0.167 0.167	57•60 60•65	99•1 99•1	56,99 60,05	94•7 7•49	51.96 55.02	90 • 2 90 • 2	46•74 49•80	531 559 •	2945. 3107.	3596 . 3799.
S/W	а Ко	0.104 0.104	45•88 47•93	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	45•60 47•65	96•4 96•4	43•20 45•24	93 * 6 93 * 6	40•93 42•98	404 444 •	2386. 2495.	2937. 3073.
C/S/#	а Ко	0.146 0.146	48•58 51•19	99•2 99•2	48•12 50•74	ម ភូមិ ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស ស	44 a 30 46 a 92	919 4 • 19 4 • 4	044 0000000000000000000000000000000000	448. 472.	2494. 2634.	3053. 3226.

TABLE 13. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES AB13.

	a U	PERCENT TOPSOIL LOST/YR	THE VIEL AND THE VR 1	LD REMA E YEAGL YEA	INING (AS Y RETURN R 10	TO LAND YEAR	THE I AND M 100 M	NITIAL ANAGEME YE	VIELD) Nt For Ar 200	PRESEN PROFIT 10	NT VALUE Stream 100	TO YEAR 200
U	PSC SR	0 • 5 • 5 • 5 • 5 • 5 • 5 • 5 • 5 • 5 • 5	24,25 28,03 18,10 15,51	0000 0004 0000	22 61 25 45 17 44 14 97	8889 1869 1869 1869 1869 1869 1869 1869	5.80 9.63 17.53 17.53	22 25 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		217 253 165	959. 1163. 927. 1093.	763. 1018. 1083. 1310.
S	a Fr	0•417 0•417 0•156 0•125	10062 120462 15044 1.04	00000 00000 00000	110 04 55 87 0 852 852	84 87 80 80 80 80 80 80 80 80 80 80 80 80 80	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	00000 00000 00000 00000	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1136 528 94	4000 0000 0000 0000	48844 8884 9889 9889 9989 9989 9989 998
3	R S S S S S S S S S S S S S S S S S S S	0.125 0.125 0.047 0.038	57 67 59 67 54 14 51 59	୬ • • • ୦ ୦ ୦ ୦ ୦ ୦ ୦ ୦	574 553 553 553 553 553 553 553 553 553 55	00000 0000 0000 0000 0000	54.01 56.28 56.14 56.39	922 922 926 97 97 97 97 97 97 97 97 97 97 97 97 97		532. 553. 477.	2999 2999 2993 2993 2966	3680 3831 3637
нХа	S S S S S S S S S S S S S S S S S S S	0.017 0.006 0.005	14 75 10 87 7 07	995 999 999 999 999 999	14•73 10•86 7•06	0000 •000 ⊷40	14•46 12•31 13•06	0000 0000 0000	14•17 12•26 13•12	137. 101. 65.	780. 660. 699.	967 824 879
C / S	A SS PSC SA	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3,43 3,43 2,65 2,52 2,52 2,52 2,52 2,52 2,52 2,52	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.72 30.47 33.30 22.85	0,0889 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00 0,4,00000000	8000 8000 8000 8000 8000 8000 8000 800	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	110 110 110 110 100 100 100 100	00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	197. 1448. 1599. 1513.	244. 1553. 1741. 1874.
¥ ∕	a na Fi	0.333 0.333 0.125 0.125	57 • 53 • 53 • 55 • 55 • 55 • 55 • 55 • 55	00000 00000	4 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0000 0000 0000	46 496 50 50 50 50 50 50 50 50 50 50 50 50 50	72.1 72.1 92.6	0000 000 000 000 000 000 000 000 0000	5224 4886 4688	2834 2996 2819 2973	33599 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559 34559
S/#	A ST T	0 • 208 0 • 208 0 • 078 0 • 078	41 • 63 43 • 63 37 • 41 33 • 41	0000 0000 0000 0044	41 12 43 16 37 20 33 30	99999 97.93 9.94 9.94 9.95 9.19	36.97 39.02 37.20 38.87	₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽	₩₩₩ ₩₩₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩	9999 9040 9490	2115 2224 2046	2573. 2709. 2527. 2635.
IS/W	a re Fr	0•1092 0•1092 001092 001092 0000 0000 0000 0000 0	440 440 440 440 440 440 440 440 440 440	NNN4 88000 NNN4	444 4744 •••01 8488 4483 404	00000 11000 4400	0404 •000 •000 •000 •000 •000 •000	► 8000 9000 900 900 900 400	00000 00000 00000 00000 00000	4450 14804 00004	2265 2404 2216	2708 2881 2723 2882

TABLE 14. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES AF01.

•

-

H H H H H H H H H H H H H H H H H H H	RCENT PSOIL ST/YR	THE VIEL AND THE YR 1	LD REMA E VEARL YEA	INING (AS Y Return R 10	TO LAND TO LAND YEAR	THE IN AND MAT 100	ITIAL Y NAGEMEN YEAR	T FOR R 200 R 200	PRCFIT PROFIT 10	T VALUE STREAM T 100	0F A 0 YEAR 200
	0.197 0.197 0.111 0.108	15.23 19.07 10.13 9.96	0000 0000 0000	14 18 9 9 79 79 79	0000 0000 0000	10.03 13.87 7.98 10.97	88800 88800 ₩₩₩84	48008 ••00 •000 •4604	138 1749 929	697 901 527	802 802 823 823
	0000 0000 0000 0000 0000 0000 0000 0000 0000	W 4 0 0 0 0 0 0 0 1 0 0 0 0	00000 00000 11144	8 8 8 8 8 8 8 8 8 8 8 8 8 8	959 97 97 97 97		9999 19499 19499 19499 19499	1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2244 524 50	137 258 57
	0000 •••• 0000 0020 0020 0020 0020	100 40 40 100 100 100 100 100 100 100 10	00000 0000 ••••	9•75 12•02 6•06 4•88	0000 0000 1000 1000 000	9009 11000 8003 8003	0000 00000 00000	8.43 6.70 7.71 7.71	1919 1129 1129 1260	4000 4000 4000 400 400	623. 773. 551.
	950 000 000 00 00 00 00 00	220084 200846 30015 30016	9000 9000 9000 9000	22•83 20•46 19•15 3•72	0000 0 0000 0 0000 0	22-72 21-30 22-63 22-63	0000 0000 044	2212 2212 2212 2212 222 222 222 222 222	212. 189. 35.	1214. 1137. 1208.	1510. 1417. 1509.
		0.N.O.O.	0000	0000	4400 •••• VVVV		0044	0400		OMON	MHOH 06PN
	0.121 0.121 0.068 0.068	25 28 28 29 540 20 540 20 540	0000 0000 ••••	25 25 25 25 20 20 20 20 20 20 20 20 20 20 20 20 20	0000 0040 0040	800 80 80 80 80 80 80 80 80 80 80 80 80	00000 00000 00000 00000	19,90 22,95 21,49 21,49	236. 264. 197.	1297. 1460. 1158. 1287.	1577. 1779. 1421.
	0+076 0+076 0+04 0+20 0+20	11.06 13.11 7.30 5.36	0000 0000 4400	10•95 12•99 7•23 5•29	0000 0000 0000	9•90 11•95 7•69 8•91	955 96 96 96	100 100 100 100 100 100 100 100 100 100	102. 121. 67.	00044 00044 4004 4004	6 5 1 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	0 106 0 106 0 050 0 058	21 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	nnnnn 99999 99999	21.34 23.96 17.53 16.34	50000000000000000000000000000000000000	19•24 21•86 17•32	NNDD MMQQ OQQQ	17•26 19•88 16•11 18•15	2234 1634	1099. 1239. 969. 1074.	1339. 1513. 1191. 1326.

TABLE 14. (CONTINUED). IRRIGATED CROP ROTATIONS

-												
t t	C C	PERCENT TOPSOIL	THE YIELD AND THE VD 3	Y E ARL	Y RETURN	TO X AU	D AND MA	IITIAL Y NAGEMEN YFA	15LD) 17 FOR 18 200	PRESEN PROFIT 10	NT VALUE Stream 100	0F A TO YEAR 200
•	נ	1100	۲	J I				L L				
(0	01.6	0	89 a 3	m	70.6	• 0	49•2	764	9746	1870
ر	r n c					m	80.3	8	58.9	854	0260	2510
		• • • •	86.1		84 8	9	74.2	• m	ø		9694.	
		0.108	194.43	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	193.09	96 + 3	185.65	93.4	>	795	EOEO	2673
ų		វ	۲ د د	0	0.7	C	2 • 6		ີ ເມື່ອ ເມື	65	520	041
n) (() (5	0	•		526.	2875.	3482.
) ((()	1	0		\$	6.6	4	5.8	50	285	787
	- -	0.083	46.71	4.66	46.22	97.0	46.04	94.7	ው	30	610	195
		i i i i	((i (c	r	4		a	2 	0
3	с С	40.	Ñ N	.	oi • Ni	• D 1	? • •	• 0 \) () {) n - C	
		40-	8. 6	• თ	100 100	•	0 0	•	0 5	1	2	0
		0.0	7.4	0 0	7-2	8	6.8	00	ۍ 4	10 M	ф Ю	4
	50	0+025	50.33	9.66	50.19	98 . 8	52+37	98.0	51.04	466.	2839.	
		21		0	72.0	4	57-8		43•0	602	908	089
n 5	r n y		- α - α				66-0	0	51.2	677	342	541
				0	α 1 1	i i V	60-4	4	52.0	563	862	160
	- -		175-91		174.91	96.7	170.26	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	161.97	1625.	9385 .	11568.
		•	• •			,	1 	ı	(U r	S S	1
M/S/U	а И	- 10	46.9	•	46 • 0	÷	37.05	• 7	0 • A • A		0 -	
			5	0	53.2	ŝ	44.8	т М	36.9	424	0	80
			42.4	0	41 0		37.8	•0	32.8	m	20	0 M
			147 87	66	147.31	97.7	146.38	96+0	141.45	1367.	7983.	9872.
							1					

TABLE 15. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES AF13.

.

2241 -3.07 93.8 -3.06 92.6 -14.42 92.6 -14.42 -5.6 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 -16.66 </th <th>OPSOIL 0ST/YR</th> <th>T ONA</th> <th></th> <th>Y RETURN</th> <th></th> <th></th> <th>INITIAL MANAGEME</th> <th>YIELD) NT FOR</th> <th>PRESE PROFIT</th> <th>NT VALUE STREAM</th> <th>OF A TO YEAR</th>	OPSOIL 0ST/YR	T ONA		Y RETURN			INITIAL MANAGEME	YIELD) NT FOR	PRESE PROFIT	NT VALUE STREAM	OF A TO YEAR
241 -3.07 99:8 -3.06 92.8 -4.421 92.4 -14.41 92.4 -14.41 92.4 -4.421 92.4 -4.421 92.4 -31.4 -31.4 -273.4 -31.4 -273.4 -31.4 -273.4 -31.4 -273.4 -31.4 -273.4 -4.421 92.0 -14.41 92.4 -14.41 92.4 -14.41 92.4 -14.41 -273.4 -31.4 -273.4 -31.4 -273.4 -31.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.4 -273.	·	:	U I	≠ r	4	2		R 20		Ô.	00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4	3.0	e B	3.6	N	8.0	4	14-1	ř	г С	
1135 -10.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 95.5 -11.045 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05 -11.05	2 4	0.7	÷	0.2	0	4	- 4		+ ư 7		0 - 0 4 4 +
1132 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.2 113.6 102.2 113.6 102.2 113.6 103.2 113.6 103.2 103.2 103.2 103.2 103.2 103.2 103.2 103.2 111.7 113.6 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5 103.5		10.1	в	10.4	ວີ.	11.44	- <	14.0	אל ס	ה ה ה ה ע	+ 0 - 4 - 4
1185 22.4 24.2 24.4 24.2 24.4 24.2 24.0 89.0 55.7 35.7 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5 35.5	÷	13+2	6	13•6	ů.	9.2	N.	11.7	124	100	2000
1085 70.649 993.3 70.66 94.2 20.65 93.6 70.743 993.4 70.76 93.6 70.743 993.4 70.76 90.3 70.76 90.3 70.77 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.6 70.76 90.76 10.19 20.77 90.6 70.76 90.76 10.19 20.77 90.6 10.19 70.76 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26 10.26	•18	2 • G	•	2 • 5	4	4 • 0	0	Ч С	0	5 4 1	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	• 18	0.	• 6	0.6	4	2.2	0	- 0 	ŭ u a l		9 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
102 12.55 99.3 12.65 96.5 55.55 93.6 7.32 117. 316. 0331 5.032 99.65 5.018 97.65 10.01 22.65 93.6 117. 119.9 117. 119.9 0031 5.032 99.65 5.045 99.65 5.045 99.65 10.02 122.9 97.8 10.02 123.9 119.9 112.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 114.9 115.9 99.9 123.0 99.9 123.0 99.9 114.9 115.9 114.9 115.9 114.9 115.9 114.7 114.9 115.9 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 114.7 <td< td=""><td>•10</td><td>7.6</td><td>. 0</td><td>7.7</td><td>\$</td><td>6.9</td><td></td><td></td><td>j.⊷ I r</td><td></td><td></td></td<>	•10	7.6	. 0	7.7	\$	6.9			j.⊷ I r		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	• 10	12+5	•	12.6	è.	6 •5	m	m • •	117	300	00 00 7 00
0.331 9.552 9.662 1.008 22 23.07 99.652 1.108 22 22.553 39.75 1119 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 1112 11112 11122 11	500		d	*	ı	•	I				
0331 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 -5:03 99:6 10:04:6 110:		յ Մ •		•	Ċ,	4 (÷.	•	2	N	
0001 22.83 99.6 3.07 97.6 3.412 847. 0004 15.55 99.7 19.65 3.07 97.6 3.422 847. 0004 15.55 99.7 15.55 99.4 22.653 21.62 11214. 1150. 011 4.46 99.6 4.46 99.4 22.653 21.652 1244. 1151. 011 4.46 99.6 4.46 99.3 4.42 99.4 21.652 294.1 21.65 1151.4 1150. 1112 204 7.66 99.3 4.42 99.3 4.42 99.3 4.12 23.7 294.2 1112 22.00 7.66 99.3 4.42 95.3 15.7 294.2 15.7 294.2 1112 22.00 70.6 97.2 2.77 93.3 3.55 2141.2 294.2 254.2 1112 22.00 97.0 2.77 91.3 3.55 91.4 151.2 119.2 194.2 1112 22.0 97.0 2.75 91.3 <td></td> <td>1 u • •</td> <td>• • 0</td> <td>‡ < ● \\ย</td> <td></td> <td>20 (•</td> <td>• •</td> <td>•</td> <td>m,</td> <td>6</td> <td>39</td>		1 u • •	• • 0	‡ < ● \\ย		20 (•	• •	•	m,	6	39
0004 15:55 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:56 99:7 15:76 18:78 11:04 11:04 11:04 11:04 11:377 2004 17.66 99:0 17.66 99:0 17.65 99:0 0.0 0.0 0.0 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04 11:04			• • (0	ר קייני קייני		4 0	4	194	242
007 22.83 99.6 22.63 99.1 22.53 0004 19.20 99.5 22.65 99.5 20.67 99.6 4.45 011 4.46 99.6 4.45 99.6 2.65 17.65 19.75 011 4.46 99.6 4.45 99.6 4.42 99.6 1.62 144.1 1104 1112 20.6 1.0.48 99.6 1.0.78 99.3 4.42 99.6 1.104 1.442 1112 20.6 1.0.78 93.6 1.0.62 1.626 99.1 1.755 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.106 1.102 1.102 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 1.104 <td< td=""><td></td><td>•</td><td>• ን</td><td>• D</td><td>ě.</td><td>0.0</td><td>•</td><td>m ● m</td><td>81</td><td>150</td><td>182</td></td<>		•	• ን	• D	ě.	0.0	•	m ● m	81	150	182
0004 19.20 99.7 19.10 99.5 21.65 99.4 21.62 11014 2004 7.66 99.6 4.46 99.3 4.42 98.9 4.38 41. 237 237 237 237 237 237 237 234 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 237 <t< td=""><td>00.</td><td>2.8</td><td>0</td><td>2 - 8</td><td>0</td><td>2.6</td><td>o</td><td>1 0</td><td></td><td>ä</td><td></td></t<>	00.	2.8	0	2 - 8	0	2.6	o	1 0		ä	
004 15.55 99.7 15.55 99.7 15.55 99.4 15.55 011 4.46 99.6 4.46 99.3 4.42 98.9 4.35 14.45 204 17.464 99.0 7.25 99.3 4.42 98.9 4.35 15.55 99.4 15.55 204 17.464 99.0 7.024 93.8 3.95 87.6 0.05 95.4 15.75 2115 1.178 99.05 97.0 7.024 93.8 3.95 87.6 2.37 294.4 1112 2.2.018 99.05 97.0 2.31 95.2 14.1 2.37 294.4 1112 2.2.018 99.05 97.0 2.971 93.2 0.094 2.37 294.4 1148 12.71 95.2 5.12 91.3 3.52 94.4 154.7 1148 12.71 91.3 3.52 94.4 3.54 214.7 0833 2.2.71 94.4 3.46 2.671 94.8 214.7 0833 2.773	80.	9•2	•		0		0) • •	4 P	4 C 4 C	
011 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 4.45 99.6 0.072 99.6 4.45 99.6 0.072 99.6 0.072 99.6 0.072 99.6 0.055 99.6 0.055 99.6 0.055 99.6 0.055 99.6 0.055 99.7 0.055 99.7 0.055 99.7 0.055 99.7 0.055 99.7 0.055 99.7 1.122 0.055 99.7 1.277 99.7 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.055 0.0	00	ິດ ທີ	• •	រភិ ព	•		0	• • •	- 4 - 4		200
204 7 20 204 10 48 99 0 0 46 204 10 48 99 0 0 46 99 0 0 46 99 0 0 46 99 0 0 46 99 0 0 46 99 0 0 46 99 0 0 46 99 0 0 46 99 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	• 01	4	• 0	4	6	4	0		-	р р	
1112 2000 2000 2000 1112 2000 2000 2000 2000 1112 2000 2000 2000 2000 1112 2000 2000 2000 2000 1112 2000 2000 2000 2000 1112 2000 2000 2000 2000 1112 2000 2000 2000 2000 1112 2000 2000 2000 2000 11148 2000 2000 2000 2000 11148 2000 2000 2000 2000 11148 2000 2000 2000 2000 11148 2000 2000 2000 2000 11100 2000 2000 2000 2000 11100 2000 2000 2000 2000 11100 2000 2000 2000 2000 11100 2000 2000 2000 2000 11100 2000 2000 2000 2000 111	ć	•	(•	. 1		;)	4	c ŋ	t T
1112 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					m.	o I	~	°,	Ø,	26	69
1112 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		+	• • c) • •	• •	-	•	è.	S	76	4
1148 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905 905		- C + C	• > (0 • •		•	e m	ښ ۲	S	41	т С
148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 148 999 999 149 999 999 149 999 999 149 999 999 149 999 999 149 999 999 149 996 999 149 996 999 149 996 996 149 996 996 149 996 996 149 996 996 149 996 996 149 996 996 149 996 9	4	5 • •	• "	י ר א	ō	•	m	Ő.	Ö	17	4
120 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•14	9•0	•	Ň	- in		ب	୍ର ଏ କ	0	a •	4
0813 22,76 97.0 2,99 081 22,76 97.0 2,99 093 2,70 99,9 4,99 093 2,70 94,93 4,00 0993 2,70 94,93 4,00 0993 2,70 99,9 4,00 0993 2,70 94,9 94,0 0993 2,70 94,0 94,0 0993 2,70 94,0 94,0 0993 2,70 94,0 94,0 0993 2,70 94,0 94,0 11,0 94,0 94,0 94,0 11,0 95,0 94,0 94,0 11,3 9,0 95,0 94,0 11,3 9,0 95,0 94,0 11,3 9,0 95,0 95,0 11,3 10,0 9,0 9,0 11,3 10,0 9,0 9,0 11,3 10,0 10,0 10,0 11,3 10,0 10,0 10,0 11,3 10,0 9		2. 2	• •		ີ ທີ	-1	: 0 	in •) -		
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			• •	2.4	•	Ġ.	4	4	2) d	- C 0 K
0933 2 0933 2 0933 2 0933 2 0933 2 0933 2 0933 2 0933 2 0933 2 0933 2 0935 4 0952 3 0952 3 0952 3 0952 3 0953 2 0953 3 0953 3 0953 3 1052 3 11 5 12 3 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130 10 130	•	•0	ě.	6 •	~	ທີ່	¢.		Ø	6	N N N N
0933 4,882 99.3 4,70 96.7 3.67 0552 12,055 99.3 4,70 96.7 3.67 0552 12,055 99.55 1.55 99.57 3.67 0552 12,055 99.56 1.55 99.57 3.67 0552 12,053 99.56 1.55 99.57 3.67 0552 130 19.56 95.64 1.53 96.57 3.475 130 19 95.7 5.97 96.56 1.1.43 3.475 130 19 95.7 5.97 95.93 95.64 3.475 130 19 95.7 5.97 95.93 3.46 0.755 130 19 95.93 4.602 95.93 3.46 0.755 130 19 95.93 3.46 0.755 3.46 0.755 1071 1 70 95.93 3.46 0.755 3.475 1071 1 20.69 9.655 3.46 0.755 3.475 1071 1	• 00	•	•	•	.0	Ó	4	ý.	្រ	0	C P
• 052 • 12.655 99.55 • 22.72 99.55 • 12.655 • 051 • 77.37 99.55 • 7.94 98.00 98.00 98.00 • 130 8<24	5 I 0 I •	• •	• •	-	ŝ	•	4) d	i M	n u 7 r
•051 17.37 99.5 17.44 98.0 10.98 96.5 11.43 169 134 •130 8.24 59.2 8.00 95.7 5.97 92.3 4.02 75 389 •130 19.86 99.2 10.62 95.7 8.59 92.3 4.02 75 389 •073 2.52 99.4 2.38 97.3 2.93 95.3 15.80 23 •071 1.56 99.4 11.70 97.3 4.13 95.3 3.11 1.50 238	0 0 0	0 • •	.	N. N	*	1.0		0	10	מ ו	10
•130 8.24 59.2 8.00 95.7 5.97 92.3 4.02 75. 389. •130 19.86 99.2 13.62 95.7 8.59 92.3 4.02 75. 389. 631. •073 2.52 99.4 2.38 97.3 2.93 95.3 1.80 238. 529. 631. •071 1.56 99.4 1.70 97.3 4.13 95.3 11 2.3	• 0.0	n • >	•	4 •	ê	6.0	•	4	0) M	d m
•130 10.86 99.2 10.62 95.7 0.97 92.9 4.02 75. 389. 457. •073 2252 99.4 2.38 97.3 2.93 95.3 1.80 23. 529. 631. •071 1.55 99.4 1.70 97.3 2.93 95.3 11 1.80 23.	•13	<u>د</u>	0	Ċ	ŭ	Ċ	¢	¢			H
•073 2•52 99.4 2•38 97.3 2•93 95.4 95.4 929 031 •071 =1•56 99.4 =1•70 97.3 4•13 95.5 3 1.80 23 23.0 231 238	•	100 • •	• •		•່• າທ	א רו ל	Vn	ວ ແ • ເ	n ç	6 6 6 6	5
•071 =1.56 99.4 =1.70 97.3 4.13 95.3 3.11 =15. 241. 255. 324	• 04	2• 0	•				ម្	0 a	7	0 - N 0	ni (mir
	0	1.5	0	1.4		Х ни в – Ф	ំព	0	о и У т	- 1 - 1	00.∢ •)(*
		0000 0000 0 0000 1 0000 0 0000 0000 00	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 <td< td=""><td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000</td><td>0.11085 0.11085 0.11085 0.11085 0.11085 0.11085 0.11085 0.1102 0.11085 0.1102 0.11085 0.031 0.0056 0.031 0.0056 0.031 0.0056 0.0331 0.0017 0.0256 0.0011 0.0017 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.00111 0.00101</td><td>0.1108 22.12.53 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.255 0.0311 0.255 0.0004 19.201 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445</td><td>0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.0017 2.5.53 99.6 2.5.53 0.0017 2.5.63 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0111 4.45 99.6 2.5.63 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 2.5.65 <t< td=""><td>0.1102 2.5.53 99.0 2.5.51 0.1102 12.7.561 999.0 2.5.51 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 96.55 95.55 0.0111 2.5.55 99.95 2.2.833 999.65 2.2.833 0.0111 2.5.55 999.65 2.2.833 999.65 2.2.833 999.65 2.4.445 0.0111 4.465 999.65 2.2.833 999.65 2.2.833 999.65 2.4.445 0.0111 4.455 999.65 2.2.833 999.65 2.4.445 999.65 2.4.445 0.0111 4.455 999.65 2.2.659 999.67 2.4.445 999.65 2.4.455 0.0111 4.455 999.65 2.2.659 999.65 2.4.45 999.65 2.4.45 0.0111 4.455 999.65 2.4.45 999.65 2.4.45 999.65 2.4.45 0.0111 <t< td=""><td>185 -2.53 99.0 -2.651 94.2 -4.07 89.0 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.11 -7.11 -7.13 -7.</td><td>1185 -2.32 99.0 -2.51 94.2 -4.07 10102 -12.58 99.3 -12.69 96.5 96.5 96.5 95.7 -7.32 10102 -12.58 99.3 -12.69 96.5 96.5 95.5 99.5 -7.173 -7.173 10102 -12.58 99.5 0.118 -7.173 97.6 95.6 95.7 1117 1031 -25.52 99.5 2.445 96.6 -1.019 97.6 -1.171 98.6 -7.173 1117 1031 -5.52 99.5 22.65 99.5 22.65 99.6 -7.173 1115 -1.171 1001 4 4.6 99.6 -1.81 99.6 4.165 99.6 2.112 1115 1011 4 4.6 99.6 2.1657 99.9 2.266 99.1 1199.6 1011 4 4.6 99.6 2.1657 99.9 2.1657 99.1 1199.6 1115 -10.48 99.6 2.156 99.9 2.1657 99.4</td></t<></td></t<></td></td<>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000	0.11085 0.11085 0.11085 0.11085 0.11085 0.11085 0.11085 0.1102 0.11085 0.1102 0.11085 0.031 0.0056 0.031 0.0056 0.031 0.0056 0.0331 0.0017 0.0256 0.0011 0.0017 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.0011 0.00111 0.00101	0.1108 22.12.53 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.25 0.1025 0.255 0.0311 0.255 0.0004 19.201 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.25 0.0011 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445 0.0111 0.445	0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.1102 2.5.53 99.6 2.5.53 0.0017 2.5.53 99.6 2.5.53 0.0017 2.5.63 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0011 4.45 99.6 2.5.63 0.0111 4.45 99.6 2.5.63 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 4.45 99.6 2.5.65 0.0111 2.5.65 <t< td=""><td>0.1102 2.5.53 99.0 2.5.51 0.1102 12.7.561 999.0 2.5.51 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 96.55 95.55 0.0111 2.5.55 99.95 2.2.833 999.65 2.2.833 0.0111 2.5.55 999.65 2.2.833 999.65 2.2.833 999.65 2.4.445 0.0111 4.465 999.65 2.2.833 999.65 2.2.833 999.65 2.4.445 0.0111 4.455 999.65 2.2.833 999.65 2.4.445 999.65 2.4.445 0.0111 4.455 999.65 2.2.659 999.67 2.4.445 999.65 2.4.455 0.0111 4.455 999.65 2.2.659 999.65 2.4.45 999.65 2.4.45 0.0111 4.455 999.65 2.4.45 999.65 2.4.45 999.65 2.4.45 0.0111 <t< td=""><td>185 -2.53 99.0 -2.651 94.2 -4.07 89.0 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.11 -7.11 -7.13 -7.</td><td>1185 -2.32 99.0 -2.51 94.2 -4.07 10102 -12.58 99.3 -12.69 96.5 96.5 96.5 95.7 -7.32 10102 -12.58 99.3 -12.69 96.5 96.5 95.5 99.5 -7.173 -7.173 10102 -12.58 99.5 0.118 -7.173 97.6 95.6 95.7 1117 1031 -25.52 99.5 2.445 96.6 -1.019 97.6 -1.171 98.6 -7.173 1117 1031 -5.52 99.5 22.65 99.5 22.65 99.6 -7.173 1115 -1.171 1001 4 4.6 99.6 -1.81 99.6 4.165 99.6 2.112 1115 1011 4 4.6 99.6 2.1657 99.9 2.266 99.1 1199.6 1011 4 4.6 99.6 2.1657 99.9 2.1657 99.1 1199.6 1115 -10.48 99.6 2.156 99.9 2.1657 99.4</td></t<></td></t<>	0.1102 2.5.53 99.0 2.5.51 0.1102 12.7.561 999.0 2.5.51 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 2.5.53 0.1102 12.7.561 999.0 96.55 95.55 0.0111 2.5.55 99.95 2.2.833 999.65 2.2.833 0.0111 2.5.55 999.65 2.2.833 999.65 2.2.833 999.65 2.4.445 0.0111 4.465 999.65 2.2.833 999.65 2.2.833 999.65 2.4.445 0.0111 4.455 999.65 2.2.833 999.65 2.4.445 999.65 2.4.445 0.0111 4.455 999.65 2.2.659 999.67 2.4.445 999.65 2.4.455 0.0111 4.455 999.65 2.2.659 999.65 2.4.45 999.65 2.4.45 0.0111 4.455 999.65 2.4.45 999.65 2.4.45 999.65 2.4.45 0.0111 <t< td=""><td>185 -2.53 99.0 -2.651 94.2 -4.07 89.0 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.11 -7.11 -7.13 -7.</td><td>1185 -2.32 99.0 -2.51 94.2 -4.07 10102 -12.58 99.3 -12.69 96.5 96.5 96.5 95.7 -7.32 10102 -12.58 99.3 -12.69 96.5 96.5 95.5 99.5 -7.173 -7.173 10102 -12.58 99.5 0.118 -7.173 97.6 95.6 95.7 1117 1031 -25.52 99.5 2.445 96.6 -1.019 97.6 -1.171 98.6 -7.173 1117 1031 -5.52 99.5 22.65 99.5 22.65 99.6 -7.173 1115 -1.171 1001 4 4.6 99.6 -1.81 99.6 4.165 99.6 2.112 1115 1011 4 4.6 99.6 2.1657 99.9 2.266 99.1 1199.6 1011 4 4.6 99.6 2.1657 99.9 2.1657 99.1 1199.6 1115 -10.48 99.6 2.156 99.9 2.1657 99.4</td></t<>	185 -2.53 99.0 -2.651 94.2 -4.07 89.0 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.11 -7.11 -7.13 -7.	1185 -2.32 99.0 -2.51 94.2 -4.07 10102 -12.58 99.3 -12.69 96.5 96.5 96.5 95.7 -7.32 10102 -12.58 99.3 -12.69 96.5 96.5 95.5 99.5 -7.173 -7.173 10102 -12.58 99.5 0.118 -7.173 97.6 95.6 95.7 1117 1031 -25.52 99.5 2.445 96.6 -1.019 97.6 -1.171 98.6 -7.173 1117 1031 -5.52 99.5 22.65 99.5 22.65 99.6 -7.173 1115 -1.171 1001 4 4.6 99.6 -1.81 99.6 4.165 99.6 2.112 1115 1011 4 4.6 99.6 2.1657 99.9 2.266 99.1 1199.6 1011 4 4.6 99.6 2.1657 99.9 2.1657 99.1 1199.6 1115 -10.48 99.6 2.156 99.9 2.1657 99.4

TABLE 15. (CONTINUED).

TABLE	•0 •		000.									
IRRIG	ATED	CROP ROT	SNOITA.									
R01.	СЪ	PERCENT TOPSOIL LOST/YR	THE YIE AND TH YR 1	LD REMA LE YEARL YEA	INING (A Y Return R 10	S A % OF TO LAND YEAR	THE IN AND MA 100	ITIAL Y NAGEMEN	IELD) T FOR R 200	PRESEN PROFIT 10	T VALUE Stream 100	DF A TO YEAR 200
υ	a nar	0.241 0.135 0.135 0.132	136-37 146-02 127-88 132-42	00000 00000 00000	134•01 143•66 126•48 131•03	0,0,0,0 0,0,0,0 0,0,0,0	115•09 124•73 1126•48 1126•31	0000 4400 4400	88.82 98.46 105.11 115.10	1252 1342 1178	6796. 7310. 6621.	8180 8819 8086 8745
S	a tr	0.185 0.185 0.104 0.104	34 48 41 44 25 81 25 81 25 81	00MM ••• 0000 0000	2224 250 250 250 250 250 250 250 250 250 250	0000 4400 ••••	25, 89 32, 54 22, 26 27, 53	0000 00000 00000	17.46 24.11 17.91 23.19	315 377 237	1647. 2002. 1356. 1636.	1945 2386 1627 1983
3	a ner	0+056 0+056 0+0316 0+031	36 29 29 29 29 29 29 29 29 29 29 29 29 29	00000 00000 00000	36 02 41 79 28 93 29 20	97-9 98-9 98-9 98-9 98-9 98-9	333 29 29 29 29 29 29 29 29 29 29 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	9969 9969 9969 99699	31.12 36.89 27.54 32.42	335 388 269 271	1875. 2183. 1598. 1853.	25830 2683 2973 2296
C/S	a coa	0.204 0.204 0.115 0.112	130.80 138.95 123.58 126.76	00000 •••• 0000 0000	128.99 137.14 122.52 125.70	00000 00000 00000 00000	114•31 122•47 115•12 123•58	887 934 93 93 93 93 93 93 93 93 93 93 93 93 93	96•99 105•14 106•48 115•06	1203• 1279• 1140• 1169•	6604 7039 6908 6908	8014 8554 7918 8486
CISIN	a ner	00000000000000000000000000000000000000	111.27 118.55 104.30 106.37	00000 00000 0000 0000 0000	110•24 117•53 103•70 105•77	95•7 95•7 97•3 97•3	101•48 108•77 100•07 107•43	0000 0000 0000	93.07 100.36 94.95 102.41	1026. 1093. 963. 983.	5715 6103 5525 5916	6995 7478 6807 7301

TABLE 16. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES AM03.

1	(PERCENT	HE VIE AND TH	LO REWA E YEARL	VINING (AS	TO LAND	AND MA	ITTAL Y	T FOR	PRESEN PROFIT	NT VALUE STREAM	OF A TO YEAR
• - - -	5			u I	r	ע ⊔	10	u I	н 20		0	0
υ	SR	• 2 4	•	ê	4	0	4	4	6 . 6	m	66	2
	υ	0.244	9.91	98.80	9.28	92.7	4 - 24	84.1	* 2•85	89.	40M	427-
	ST	• 08	~	6	4	- 6•9	ي •	•	2.4	ø	46	31
		• 06	۳) ۱۳)	.	•••	~	ř.	ື້	N •		06	40
s	SR	• 18	5. 10. 10.	•	2 • 5	4 6	0 •	8	5 8	2	ē Ģ	224
		•18	4.0	•	0.6	4 • 2	2. 2	0	4.0	ŝ	5	103
	SТ	0.067	=6.1 9	99.4	#6.26	97.5	=5. 83	95•6	■6 •42	● 80 11 11	=287.	■36 4 ●
		• 05	0 0	6	8.6	7. 9	4 8	•	ณั เก	10	241	00E
3		0.50	~	6	-	7.8	4	Ś			3	
	υ	02	10	•	4	8.1	0			117	10	• 0 • 10
	ST	0.020	► ► • • •	99.6	3 79	0.0	m 1 • m	10 00 0		• 10 ₩		6.6
		•0	•	÷6	•	-	0 0	8	6	¢Ö	Ĩ	-108.
H/d	SR	00 •	0 • •	0	2.8	4.9	2.6	0	0 •	0	214	503
	ST	0	0 • •	•	4	9.6		0		10		417
	ЪТ	0.002	19.16	66•7	19.15	66 • 6	22.66	99	22.70	177.	1209.	1510.
α	SR	0.011	4.17	9.6	4.16	66° 3	4 . 12	98 • 9	4.08	3 9●	221.	275.
c/s	sR	• 20	3•2	•	•	m m	(V) •	ĥ	• 0	21	17	17
	υ	•20	•••	æ	5.6	3.7	•	Ň	5	~	68	00
	ST	0.073	9.01	5 5 a 4	9• 8 4	97 . 3	8.41	95 8 2	7.01	83.	502.	607.
	t t	• 02	¢ •	•	•		~	\$	•	N	4 0	б С
× ∠	чS	•15	4 • 6	•	- 19 - 19	5.2	1.4	•	ý.	4	2	47
	υ	0.150	17.74	1065	17.39	95.2	14.52	91.2	11.65	163.	874.	1049.
	SТ	• 05	0.1	•6	0 • 0	7.9	6.6	•0	0 0	46	25	698
		• 0 •	9 • 2	в	•	å	2 • •	•	1	١D -	6 6	60
S/W	SR	60.			Ŭ.	.0	• 9	•	•	ິທ	3	6
		0.094		₩ •66	4.70	96.7	3.66	94•2	2.68	44.	232.	274.
		no	0) •	•	¢.	ື ອີຍ	0.	•	õ.	Ň	17	4
		• 0 2	n N	0	10 10 10	8	iù ●	N-	m ●	E		m
C/S/W		• 13	2.1	Ф	6.1	ທ	~	• N	v) •	1	94	Ŏ
	υ	0.131	14.77	99 • 2	14.51	95.6	12.32	92.2	10.21	136.	733.	883.
		• 0	6 • N	•	e O	6 . 1	•	.0	7.2	50	0	ŝ
		۲ כ	Ľ	c	U	•	4					1

PRESENT VALUE OF A Profit Stream to Year 10 100 200
THE VIELD REMAINING (AS A X OF THE INITIAL VIELD) And the yearly return to land and management for yr 1 year 10 year 100 year 200
PERCENT TOPSOIL LOST/YR
Ð
ROT.

=433**.**

=348.

-61.

***6**€54

93.83

654

96•2

59+1 m6+54

≈6 54

0.194

SР

α

000	
ENT FOR SOIL SERIES BDLD.	
SOIL	
FOR R	
ND PER ACRE RETURN TO LAND AND MANAGEMENT F	
AND	
LAND	
10	
RETURN	
ACRE	
рпа	
AND	
LOSS	
YIELD	
17.	
TABLE	

TABLE 18. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES BF13.

ROT.	СР	PERCENT TOPSOIL LOST/YR	THE VIEL AND THE YR I	D REM YEARI YE	AINING (AS Ly Return Ar 10	TO LANY	F THE I AND M 100 M	NITIAL ANAGEMEN YE/	VIELD) Nt for Ar 200	PRESEN PROFIT 10	NT VALUE Stream 100	TO YEAR 200
υ	A L L L L L L L L L L L L L L L L L L L	0.234 0.234 0.134 0.132	•12•30 •19•65 •22•99	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-12-60 -12-60 -19-83 -23-17	95•7 95•7 97•0 97•1	1 14.71 1 10.87 1 19.45 1 17.53	0000 000 000 000 000 000	1111 1203 1204 1305 1305 1305 1305 1305 1305 1305 1305	1115 1115 11830 11830	#712 #507 #884	
S	a rest	0.180 0.180 0.103 0.103	11 1000 1000 100 100 100 100	++™™ ••••• •••••	11 11 11 11 11 11 11 11 11 11 11 11 11	96 96 97 94 97 97 97 97 97 97 97 97 97 97 97 97 97	844 844 844 844 844 80 844 80 844 80 80 80 80 80 80 80 80 80 80 80 80 80	000- 000- 0000- 00000	1111 999 995 1011 101 101 101	•	-291 -194 -473 -460	1111 1111 1111 1111
3	R S S S S S S S S S S S S S S S S S S S	0000 0000 0000 0000 0000 0000	00000 •4000 ₽4000 ₽0000	0000 0000 4444	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	00000 80000 44000	10,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20,255 20	9999 7989 4488 4488	1000 1000 1000 1000 1000 1000 1000 100	0440 0440 1	121• 121• 151•	1455 181 181
HZd	ASS TS TS	000 •00 •000 •400	22•74 19•10 15•46	000 000 000 000 000	22•73 19•09 15•45	000 000 000 044	22•64 20•59 21•48	0.00 0.00 0.00 0.00	22•55 20•60 21•57	211.	1210. 1099. 1146.	1504 1372 1436
œ	SR	0•011	5+47	£ 19 10 10 10 10 10 10 10 10 10 10 10 10 10	5•47	£ ●66	5+44	0•66	5.41	51.	291.	361.
c/s	A LA	0.198 0.198 0.113 0.112	0000 0000 0000 0000	0000 0000 1100	0000 0000 0000 11	96 8 97 8 97 8 97 8 97 8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0000 0000 0000 0000	1000 0000 0000 0000	**** ກຽກວ ເບເດອ # #	121 130 166	147 147 141 141
C / W	a solution	000 144 1400 144 144 100	400 40 0 1 1 1 1	NNMFI	400 60 70 70 70 70 70 70 70 70	96•9 96•9 97•8 97•9	1.76 4.81 2.18 0.70	0000 0000 0000 0000	10000 10000 10000 11	0000 000 000 000 000 00 00 00 00 00 00	141 341 844 54	158. 361.
S	S S S S S S S S S S S S S S S S S S S	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	0000 0000 0000 0044	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	7 • 7 9 7 • 7 9 7 • 8 9 4 • 8 9	€ 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	00000 00000 00000 4400	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 004 - 004 - 004	50 159 120	1 1 900 1 7 40 1 3 40 1 3 40
N/S/	SO PS TT SS PS	0+126 0+126 0+072 0-071	កាលលក សង្គាល់ សង្គាល់ ស្គាល់ស្គា ព្រំព្រំ ព្រំព្រំ ព្រំព្រំ ព្រំព្រំព្រំ ស្គាល់សំគា ព្រំព្រំ ស្គាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាល់សំគ្នា សំគ្នាលសំគ្នា សំគ្នាលសំគ្នា សំគ្នាល សំគ្នា សំគ្នា សំគ្នាល សំគ្នា សំគ្នា សំគ្នា សំគ្នាល សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សំគ្នា សាស សំគ្នា សំគ្នា សំគ្នា សំព្រ សំគ្នា សាស សំគ្នា សំពា សំពាល សំគ្នា សំព្រ សំគ្នា សំព្រ សំគ្នា សំពា សំព្រ សំពា សំព្រ សំព្រ សំសំសំ សាស សាស សាស សំពា សា សា សា សាស សាស សាស ស សាស សាស សាស សា	0000 0000 00000	00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	97•1 97•1 98•0	14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0000 0000 00000 00000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0400 0400 0400		

TABLE 19. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES BF35.

ROT.	с С	PERCENT TOPSOIL LOST/YR	THE VIELD AND THE YR 1	х Т Т Т Т Т Т Т Т	INING (AS Y Return R 10	TO K K K K K K K K K K K K K K K K K K K	T T T T T T T T T T T T T T T T T T T	NITIAL ANAGEME YE	YIELD) Nt for Ar 200	PRESE PROFIT 10	NT VALUE Stream 100	TO YEAR 200
υ	8002	0.595 0.595 0.290 0.271	121 49 130 84 137 65 137 63		-22-19 -18-35 -31-17 -37-94	99988 994911	200 20 20 20 20 20 20 20 20 20 20 20 20	88200 88700 8400	448 448 448 448 844 80 80 80 80 80 80 80 80 80 80 80 80 80	-202 -167 -287 -350	11288 15583 15583	115838 115838 115634
S	R L L	0 • 536 • 2236 • 2236	•10•48 •8•65 •17•77 •26•17	00000 00000 4400	10.73 17.89 17.89 17.89	8800 0000 4480	1115 4 200 1115 1115 1115 1115 1115 1115 1115 1	8-00 500 6000	-22.54 -22.54 -15.80 -15.80	181 161 161 161 100 100	0000 0000 1111	815 815 1028 1028
3	A LSC SR	0 • 161 0 • 161 0 • 067 0 • 063	000 00 00 00 00 00 00 00 00 00 00 00 00	0000 0000 0000		989999 986 986 986 986 986 986 986 986 9	111-20 1-4-83 111-25	99994 49994 9779 9700	• 11.95 • 11.65 • 11.952		888 88 88 88 88 88 88 88 88 88 88 88 88	447 4296 1735
ΗΛď	S P S S S S S S S S S S S S S S S S S S	0•021 0•009 0•008	22•74 17•44 10•73	000 000 000 400	22•71 17•43 10•72	0 M M 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22•46 19•72 20•02	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22+20 19+70 20+14	211• 161• 99•	1206. 1055.	1497 1318 1347
α	SR	0•032	5.47	99.4	5+46	98 . 8	5.38	98•2	5.31	51.	289.	359.
c/s	R C S L L L L L L L L L L L L L L L L L L	0 • 589 0 • 589 0 • 246 2246	10000000000000000000000000000000000000	00000 00000 00000	2400 260 260 260 260 260 260 260 260 260 2	00000 00000	1111 1111 140 140 140 140 140	0000 0000 0000 0000	1 31.71 1 28.88 1 17.71 1 16.70	-79- 152- 221-	1537 1386 1770	1822 1822 1975 1929
¥ \ U	R C S S S S S S S S S S S S S S S S S S	0 • 429 0 • 429 0 • 179 0 • 1679	1200 1200 1200 1200 120 100 100 100 100	00000 00000	100 100 100 100 100 100 100 100 100 100	0000 0000 0000 00040	140 941 2006 120 006	00000 8000 ••••	121 18 18 19 19 13 13 13	1 1 28°	111 200 200 200 200 200 200 200 200 200	111 100 100 100 100 100 100 100 100 100
S/W	R S S F S S S S S S S S S S S S S S S S	0 • 268 0 • 268 0 • 112	11 10 10 10 10 10 10 10 10 10 10 10 10 1	00000 00000 00000		0000 0400 0400	10.920 10.920	88999 99999 99999 99999	111 111 111 111 111 110 100 100 100 100	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	111 111 111 111 111 111 111 111 111 11	1111 122 122 122 122 122 122 122 122 12
CISIM	a ner	00 • 375 0 • 375 0 • 156	11 00000 0400 0400 0400 00000	0000 0000 0000 0000 0000	-5-37 -2-76 -13-07 -20-67	997 997 999 999 999 999 999 999 999 999	1 1 1 1 1 1 1 1 1 1		1 12 • 05 1 12•04 1 12•30	4 4 4 4 4 4 4 4 4 4 0 0 0 0 0 0		

ABLE	20.	VIELD LC	LOSS AND PEI	R ACRE	RETURN	TO LAND	AND MAN	MANAGEMENT	FOR SOIL	SERIES	EF58.		
ROT.	СP	PERCENT TOPSOIL LOST/YR	THE VIEL	C REMA Yearl Yea	AINING (AS Ly Return Ar 10	S A X OF TO LAND YEAR	F THE INI 2 AND MAN. 2 100	ITIAL Y NAGEMEN YEA	TELD) T FOR (R 200	PRESE	NT VALUE STREAM	TO YEAR 200	1
α	SR	0• 094	5.47	6 6 •3	5.44	97.6	5.24	96•3	5 • 0 8	51.	286.	354.	i
TABLE	21.	VIELD LO	LOSS AND PE	R ACRE	RETURN	TO LAND	AND MAN	MANA GEMENT	FOR SOIL	SERIES	BM35.		1
ROT.	9	PERCENT TOPSOIL LOST/YR	THE VIELO AND THE VR 1	D REWA VEARL VEARL	INING (AS Y Return R 10	TO LAN Yean	F THE IN D AND MA R 100	ITIAL Y NAGEMEN YEA	11 11 12 14 10 14 10 14 10 14 10 14 14 14 14 14 14 14 14 14 14 14 14 14	PRESEN PROFIT 10	T VALUE Stream 100	OF A TO YEAR 200	I
U	မ္မာပ	1.163 1.163	= 12•44 = 8•60	E+16	■13●68 ■9∎85	50°00 50°	-44.07 -40.23	50•0 50•0	■44。07 ■44。07 ■40。23	=121. =86.	-1108. -903.	1 682 1 428	1
S	а U	0+895 0+895	■5+12 ■3+29	ו×6	#5•59 #3•76	64+ 0+40 0+40	"15.66 13.84	50 • 0 50•0	-19-83 -18-00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		-647	
3	αsυ	0•268 0•268	∎6• 20 ∎3• 94	98 • 9 • 9 • 9	■6•38 ■4•11	95•2 95•2	* 7 * 55 * 5 * 28	888 •08 4 •08	#9•43 #7•16	- 28 - 37	=362. =241.	#468 =318	
H/d	SR	0+036	14+67	4 •66	14.63	98.7	14.27	98 • 0	13.92	136.	•E77	957.	
α	SR	0.054	4.15	99 . 4	4.14	98.4	4.03	97.4	3• 93	9 8 e	218.	270.	
c/s	a a O	0 984 486 0	0•32 3•15	97•6 97•6		52+ 3 52+ 3 52- 32- 32 52- 32- 32 52- 32- 32- 32- 32- 32- 32- 32- 32- 32- 3	26.07 23.24	50 50 50	=27,37 =24,54	80 80 8	=263. =112.	- 620 -432	
H V V	<u>ж</u> о	0•716 0•716	-0 +26 2+79	6 • • • • • • • • • • • • • • •	=1 • 01 2 • 04	100 80 80 80	-11-19 -8-14	00 00 00	128.50 125.45	22 20 1	= 169. =6.	-464 -261	
3	a S O	0•447 0•447	∎ 2 0 • 34 1 0	ດ.ດ. ສຸສ ເບເບ	# 5 • 5 • 5 8 • 5 8	92•0 92•0	■4.86 ■2.81	00 44 00	■14•48 ●12•43	=23. =4.	-177- 	=275. =139.	
C/S/W	αυ	0•626 0•626	0• 85 3• 47	98•2 98•2	0.27 2.88	85 85 85 85	-6.10 -3.48	50•0 50•0	=24.00 =21.38	29 .	-67. 73.	=266. =92.	57

SOIL SERIES BM58.	PRESENT VALUE OF A Profit Stream to Year 10 100 200	38• 215• 264•	SOIL SERIES BDFS.	PRESENT VALUE OF A Profit Stream to Year 10 100 200	212. 1216. 1512.	51• 292• 363•	SOIL SERIES BSSE.	PRESENT VALUE GF A Profit Stream to Year 10 100 200	210. 1186. 1462.	13. 68. 81.
MANAGEMENT FOR SC	INITIAL YIELD) Management for Year 200	95 + 0 3+66	MANAGEMENT FOR S	INITIAL YIELD) Management for Year 200	99 . 4 22.71	99.3 5.45	MANAGEMENT FOR SI	INITIAL YIELD) Management for Year 200	95.7 20.49	94 .1 0.93
LAND AND	A X OF THE D Land and Year 100	96•9 3•87	LAND AND	A % OF THE O Land and Year 100	99.6 22.78	99.5 5.47	LAND AND	A X DF THE O Land And Year 100	97.5 21.55	96.5 1.13
RE RETURN TO	AINING (AS Ly Return t Ar 10	2 4.11	RE RETURN TO	MAINING (AS RLY Return t Ear 10	7 22.84	7 5.49	RE RETURN TO	MAINING (AS Rly return t Ear 10	3 22•62	2 1+34
S AND PER ACRE	THE YIELD REW And the Year Yr 1 Ye	4.15 99.	S AND PER ACR	THE YIELD REI AND THE YEA	22.84 99.	5+49 99+	SS AND PER ACRE	THE VIELD RE AND THE YEA YR 1	22.73 99.	1•36 59•
VIELD LOSS	PERCENT TOPSOIL LOST/YR	0.145	VIELD LOSS	PERCENT TOPSOIL LOST/YR	0•003	0+005	VIELD LOSS	PERCENT TOPSOIL LOST/YR	0.034	0•052
22.	9	sR	23 .	с С	as	ŝ	24.	6	as	SR
TABLE	ROT.	α	TABLE	ROT.	H/d	α	TABLE	ROT.	H/d	œ

TABLE 25. YIELD LDSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES BT13.

IADLE	• •											
ROT.	5 5	PERCENT TOPSOIL LOST/YR	THE VIELO AND THE VR 1	D REWAI YEARLY YEARLY	NING (AS Return 10	TO LAND YEAR	THE IN AND MA 100	ITIAL Y Nagemen Yea	IELD) T FOR R 200	PRESEN PROFIT 10	T VALUE STREAM T 100	OF A O YEAR 200
							1			1	r v	
U		• 26	Ö.	B	ທ ອ	• ທ	ທ •	0		n (o٠	n (
•		26	•	ф Ф	۳۵ •	م	(م) في	•	Ω •	D,	4	÷ I
		4	Q 0	0	1-0	6.9	~	0	2.0	Q,	N	
	, H	0+136	-3-81	99+2	-4-06	97.0	1.13	95+2	-0-26	=36.	126.	4
		4	1	(Ċ		ľ	ç	U,	L.	-	4
ა		• 20	•	* 5	ŏ∙ ●	• 0 •	⊊ (●	v	•	- 4	+ 0) (
		+ 20	4 85	0.66	4 69	96e 1	00.00	ን (• 1 እ (9 5 t 1 1		
		• 10		• 0	₩ •	4 • 4	•••	0	•	ЭI	† 0	0 0 1 -
	с Н	0+105	6.9	•	Õ • •	۔ ۱۹	0.0	0		n Q		N T
							1	ł	(1	•	i c
3		• 0.6	т•6			2	18.57	97•2	17.98	178.	10120	
:		• 06	1. 0	• •	4	8.2	0	•	0.2	5	רי קורי	4 I 0 I
		NO T	4.6	•	ۍ ۹	8.8	5.4	80	¢ €	ŝ	N D	050
		0.031	11.28		1.2	8.8	6.9	0	6.7	40	Ú.	140 140
)	i >	•	1							
H/a		00	4.6	• 0	4 • 6	0• a	i0 4	•	4	136.	780.	969 .
•				• 0	1	9.4	2.0	₽ • 6 6	12.30	Ö	Ô.	NI I
	۲ ۵	400.00	6.98	99 . 8	6.98	4	13.01	6	3 . 1	é Q	տ Ծ	4
α	SR	0.012	6+35	99 • 5	6.34	99•2	6.31	98•9	6•28	59.	337.	
•		0	•	(0 6	a u		•	7.0	ΔA	000	59
c/s		N C N C		• > (Ďv ● ∩ ¢	0 0 •	ייי ל • •	• •) K) - v) ()
	υ	0.226	19+01	0.00	1 3 0 0 3			ア マ ー ビ フ へ			100 - F	
		2 	0 •	• 7-1	າ • ວາ	N I •		e n i	0 ጦ ቀ ኮ _ተ	- 1	1 C 1 a) <) h
		• 1 1	•	• 5	•	n	n • V	•	י ● וו	ז	5	} -
			•	((,		r c	<	C C	F	580	571
¥\U		Ö H H		• ፓ (4 4 0 0	0 V • 0	- 0 • •	•		4 C) 4) 4 7 7 7	- F
		0.164	28.16					± 4 ● 1 0 0				
		• 08	9	• •	י בי שיי הי		01 2	• 0 \	00		1 U 0 ⊂ 0 ←	>u > 0 ? <
	h d	• 08	6 • 1	, o	ດ. ຄ	7•8		ō	α • •	ን ተ)) ;
		•	c v	c	, V	u - L	0 1 1	ļ	4 - 4	ດ ເດ	1	037
ヨンク	х Л		• •	• • () () -	5 t 5 t) 4	× v		- U	3
	υ	0+103	18.40	5								
		• 02	N •	.	•	0	* -	•	♪ (● 	5		
	L L	÷ 02	•	.	•	9 • 19	N 7	•	N	n i	D N	0
		•	•	¢	ď	Ś	6.0	ت	7 8.	4	079	323
N/2/1	r No			0 0 0 0 0 0					20.48	018	1219	1496.
		* † C +	0 4 • •	• • •	יי שיי ער ל		9 M 9 M 9 M		5) ሆ • 4	90.9	122
				• > <	01 •	•) 0 • •	5 4) ((βα	100
		10.	1.0	ויי די		e D		5	1	>	5	1

TABLE 26. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES DC13.

ROT.	с С	PERCENT TOPSOIL LOST/YR	THE YIELC AND THE YR 1	₩ 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 2 2 2 2	AINING (AS Ly return Ar 10	TO X Y LA	OF THE IN ND AND MJ AR 100	NITIAL ANAGEMEN YEJ	VIELD) Nt For Ar 200	PRESE PROFIT 10	NT VALUE Stream 100	E OF A TO YEAR 200
w	a o re	0.210 0.210 0.120 0.119		00000 0000 0000 00000	15 15 15 15 15 15 15 15 15 15 15 15 15 1	0000 000 000 00 00 00 00 00 00 00 00 00	11120.95 120.95 120.95 11120.95 11120.95 11120.95	5000 5000 5000 5000	117.85 116.02 121.18 21.18	1024. 204.	••••••••••••••••••••••••••••••••••••••	11128 11378 11378
3	a tr	0+063 0+063 0+063 0+063 0+063	1 1 1 1 1 1 1 1 1 1	0000 0000 ••••		98•2 98•2 98•7 98•7	∎ 10,0,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 10,34 1	999 98 98 98 98 98 98 98	1 10 10 10 10 10 10 10 10 10 10 10 10 10 1	11 11 11 11 11 11 11 11 11 11 11 11 11	100 100 100 100 100 100 100 100 100 100	1 1 2 4 2 7 6 2 7 6 6 2 6
H/d	A P S S P S	0008 0008 0008	14•67 10•78 6•98	0000 0000 0000	14•66 10•78 6•98	0000 0000 044	14•57 12•28 13•00	₽ • • • • • • • • • • • • • • • • • • •	14.47 12.29 13.10	136. 100. 65.	779 656 695	969 820 • 478
α	ŝ	0.013	0.92	99•5	0•92	99 . 2	06 • 0	98•9	0.88	•6	4 9.	60.
S/#	a re	0000 00000 00000 00000	11 146 11 146 10 10 10 10 10 10 10 10 10 10 10 10 10	0000 0000 0000 00040 00044	1 1 1 1 1 1 1 1 1 1	9989 988 988 988 988 988 988 988 988 98	40000 4000 11140 1111	0 • 96 0 • 26 0 • 7 0 • 7 0 • 7 0 • 7 0 • 7 0 •	1 1 1 1 1 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0	1923 1923 1923 1923	111 4200 4200 4200 440 440	# # # 601 # # 8651 8 851
TABLE	27.	VIELD LOS	JSS AND PER	ACR	E RETURN T	ONV TO.	AND MANA	VA GEMENT	T FOR SOIL	SERIES	DC35.	
RDT.	a d	PERCENT TOPSOIL LOST/YR	THE YIELD AND THE YR 1	Y E ARL Y E ARL Y E ARL	AINING (AS -Y RETURN AR 10	40 40 40 40	OF THE IN ND AND MA	NITIAL Y ANAGEMEN	YIELD) Nt For Ab 200	PRESEN	NT VALUE STREAM	TO YEAR

60

957**.** 58.

773.

136**.** 9.

98**•0** 97**•4**

98**.**7 98.3

99*****4

0+ 037 0+ 055

a as

H H A

13.90

14•26 0•84

14.63 0.91

14•65 0•92

D MANAGEMENT FOR SOIL SERIES HYGL. He initial vield) present value of a No management for profit stream to year 00 year 200 10 100 200	•33 44•6 =3•20 8• 20• 5•	D MANAGEMENT FOR SOIL SERIES LLFS.	HE INITIAL VIELD) PRESENT VALUE OF A ND MANAGEMENT FOR PROFIT STREAM TO YEAR 00 YEAR 200 10 100 200	•12 98•9 4•09 38• 220• 274•	D MANAGEMENT FOR SOIL SERIES LYAL.	HE INITIAL VIELD) PRESENT VALUE OF A ND MANAGEMENT FOR PROFIT STREAM TO YEAR 00 YEAR 200 10 100 200	•73 99•4 22•71 211• 1211• 1508•	•17 99•4 5•16 48• 276• 343•
355 AND PER ACRE RETURN TO LAND AND The yield remaining (as a x of the and the yearly return to land and yr 1 year 10 year 10		OSS AND PER ACRE RETURN TO LAND AND	THE VIELC REMAINING (AS A % OF THE And the Yearly return to land and Yr 1 year 10 year 10		OSS AND PER ACRE RETURN TO LAND AND 1	THE YIELD REWAINING (AS A X OF THE And the yearly return to land and Yr 1 year 10	22.74 99.5 22.74 99.5 22.7	5.18 99.5 5.17 99.5 5.1
YIELD LO PERCENT TOPSOIL LOST/YR	0.400	VIELD LO	PERCENT TOPSOIL LOST/YR	0.013	VIELD LO	PERCENT TOPSOIL LOST/YR	0.001	0+005
СР 28.	SR	29.	đ	s	30•	Ч	аs	SR
TABLE ROT•	α	TABLE	ROT.	R	TABLE	ROT.	H/4	α

TABLE 31. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES LNCL.

R 0.0.174 -5.871 99.1 -7.09 99.1 R 0.174 -2.871 99.1 -7.09 99.1 R 0.174 -2.871 99.1 -7.09 99.2 R 0.134 -2.671 99.2 -2.779 99.6 R 0.0040 12.09 99.65 12.03 99.69 R 0.0040 12.09 99.65 12.03 99.69 99.75 R 0.00107 12.09 99.65 14.75 99.65 99.75 99.75 R 0.0107 12.0107 99.65 14.75 99.65 99.75 99.75 R 0.0107 15.14 99.65 99.65 11.6.75 99.65 99.75 R 0.0107 15.14 70.35 99.65 91.6 97.75 R 0.0107 15.14 75.94 99.16 97.75 99.18 R 0.0107 15.14 99.35 11.14.75 99.18 97.55 99.75 R 0.00174 136.45 99.35	C •	PERCENT TOPSOIL LOST/YR	THE VIE AND TH VR 1	HE YEAR	AINING (AS LY RETURN AR 10	S A X O TO LAN YEAN	F THE IN D AND MA R 100	ITIAL NAGEME YE	YIELD) NT FOR Ar 200	PRESEL PROFIT 10	NT VALUE STREAM 100	E OF A To YEAR 200
SR 0.0134 4.47 99.2 -2.64 99.2 -2.77 99.2 SR 0.0040 12.082 99.65 12.033 99.6 3.14 99.6 99.6 99.9 99.7 99.9 99.6 99.6 99.7 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 99.6 <th>ង្កក</th> <th>0.17</th> <th>00 ~/ • •</th> <th>.</th> <th>00 •• • •</th> <th>44 ••</th> <th>10.25 16.42</th> <th>89•7</th> <th>13.61</th> <th>1 2 4 8 8 8 8</th> <th>-436 -231 -231</th> <th>**************************************</th>	ង្កក	0.17	00 ~/ • •	.	00 •• • •	44 ••	10. 25 16. 42	89 • 7	13.61	1 2 4 8 8 8 8	-436 -231 -231	**************************************
SR 0.0040 12.003 99.65 12.003 99 SR 0.0040 12.003 3.14 99.65 14.75 99 SR 0.0040 12.003 3.14 99.65 14.75 99 99 SR 0.0047 4.203 99.65 14.75 99.65 3.14 99 SR 0.0147 4.203 99.61 3.14 99 6 3.14 99 SR 0.0107 12.013 99.03 11.85 99 96 97 97 SR 0.0057 56.85 99.93 11.85 99 97 97 97 SR 0.0057 56.85 99 99 3 14.90 97 97 SR 0.0057 59.95 99 99 3 14.90 97 97 SR 0.0057 59.95 99 99 3 11.080 96 96 SR 0.0057 10.9057 99 99 3 14.46 97 SR 0.0174	ώņ	0 • 1 3 0 • 1 3	40	00	2 4 7 4 6	95•6 95•6	• 5•70 •3•87	92•1 92•1	• 6•76 •4•94	84 25 8	168. 168.	■345 1224 1224
SR 0+005 14+75 99+6 3+14 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 99 97 97 97 99 97 97 97 99 97 97 99 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97 97	ဖူဂ	0 •0 44	2•08	00	2•0	98 98 98	9.17 11.44	97 •1 97 •1	8•58 10•85	91. 112.	510. 631.	626. 777.
SR 0.147 7.03 59.6 3.14 99.6 3.14 99 SR 0.147 7.03 59.6 3.14 99.6 3.14 99 SR 0.107 12.03 59.1 5.75 95 95 SR 0.107 12.08 99.3 11.85 97 95 95 SR 0.0067 6.85 599.4 6.76 97 97 97 SR 0.0094 11.97 12.08 99.3 11.85 97 97 97 SR 0.0094 11.97 99.35 99.3 91.8 97 97 97 97 SR 0.0094 11.97 99.35 99.18 96 96 96 GATED CROP ROTATIONS 99.3 91.8 96 96 95 SR 0.134 196.13 99.3 91.8 95 95 94 95 95 SR 0.134 105.13 99.2 97.52 97 95 95 95 95	ŝ	00 * 0	4 • 7	о	4•7	99 • 5	14.66	£•66	14.55	137.	784.	975.
SR 0.147 4.20 99.3 11.85 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95	Sд	00 00	•	•	-	99 . 4	3.11	99.1	3 • 08	29.	167.	207.
SR 0.0.107 12.08 99.3 11.85 96 SR 0.067 5.85 99.3 14.90 96 SR 0.067 5.85 99.3 14.90 97 SR 0.067 5.85 99.3 14.90 97 SR 0.0067 5.85 99.35 99.4 5.76 97 SR 0.0094 11.97 97 99.35 99.43 96 96 GATED CROP ROTATIONS 99.35 99.43 99.43 96 96 SR 0.0174 136.45 99.3 11.44.37 94 95 94 SR 0.174 136.45 99.2 97.522 95 95 95 95 SR 0.134 105.13 99.2 97.552 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95	Ϋ́υ	00 41 41 41	N 0	55	01	95 95 95 95	1•57 4•40	ры 100 100	-0. 76 2.07	9 9 9 9 9 9	166. 317.	175. 363.
SR 0.067 6.85 99.4 6.76 97 C 0.067 8.90 99.4 6.76 97 SR 0.0094 11.97 99.35 99.4 8.81 95 C 0.0094 11.97 99.35 99.3 9.18 96 GATED CROP ROTATIONS 99.35 99.3 11.80 96 GATED CROP ROTATIONS 99.35 99.3 11.80 96 GATED CROP ROTATIONS 99.45 99.3 11.44.37 94 SR 0.174 136.45 99.2 97.52 95 95 94 SR 0.134 105.13 99.2 97.52 95 95 95 95 SR 0.134 105.13 99.5 69.16 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95	κυ	0•10 0•10	2• 0 5• 1	•••	4 • 4 8 0	₽ ₽ 9 9 6	9•77 12•82	លល • • ២២ ០០	7•82 10•87	111.	594. 756.	711. 913.
CR 0.094 9.35 99.35 99.3 9.18 96 GATED CR0P R0TATIONS 99.35 99.35 99.35 96 GATED CR0P R0TATIONS 99.35 99.35 99.48 96 96 GATED CR0P R0TATIONS 99.35 99.3 11.80 96 96 SR 0.174 136.45 99.45 99.2 97.52 94 95 97.52 95 SR 0.134 105.113 99.2 97.52 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 95 <	к Ч	0 • 06 0 • 06	8 0	00	⊳ 0		5 • 91 7 • 95	95•6 95•6	5.09 7.13	80 80 80	049 940 940	418. 553.
GATED CROP ROTATIONS 59 59 59 54 55 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 54 55 55 55 55 55 55 55 55 55 55 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 56 <td></td> <td>60 •0 •0</td> <td>6 • 0 • 0</td> <td>• • •</td> <td>9•1 1•8</td> <td></td> <td>7.62 10.24</td> <td>994 44 00</td> <td>6•15 8•77</td> <td>86. 110.</td> <td>461. 600.</td> <td>552. 726.</td>		60 •0 •0	6 • 0 • 0	• • •	9•1 1•8		7.62 10.24	994 44 00	6•15 8•77	86. 110.	461. 600.	552 . 726.
SR 0.174 136.45 55.45 55.11 34.72 94 C 0.174 146.10 99.1 144.37 94 SR 0.134 196.10 99.2 97.52 95 SR 0.134 105.13 99.2 97.52 95 SR 0.134 105.13 99.2 97.52 95 SR 0.0340 69.40 99.5 69.16 98 SR 0.0400 69.40 99.5 69.16 98 SR 0.0400 75.17 99.5 74.93 98 SR 0.147 174.62 99.5 174.93 95 SR 0.147 174.62 99.1 173.14 95	GATE	CROP	ATION									
SR 0.134 98.48 99.2 97.52 95 C 0.134 105.13 99.2 97.52 95 SR 0.040 69.40 99.5 69.16 98 C 0.040 69.40 99.5 69.16 98 C 0.040 75.17 99.5 74.93 98 C 0.040 75.17 99.5 74.93 98 SR 0.147 166.47 99.1 164.99 95 SR 0.147 174.62 99.1 173.14 95 SR 0.094 147.33 99.3 146.48 95	αç	0.170.17	36•4 46•1	• • •	24 × 7	44 • • 0 0	120•49 130•14	89•7 89•7	125.39 115.03	1256. 1345.	6918. 7432.	8415. 9055.
SR 0.040 69.40 99.5 69.16 98 C 0.040 75.17 99.5 74.93 98 SR 0.147 166.47 99.1 164.99 95 SR 0.147 174.62 99.1 173.14 95 SR 0.094 147.33 99.3 146.48 95	ч К С	0•13 0•13	98•4 05•1	• • • •	97•5 04•1		89•40 96•05	92•1 92•1	81•55 88•20	908 969	5048. 5403.	6174. 6615.
SR 0.147 166.47 99.1 164.99 95 C 0.147 174.62 99.1 173.14 95 SR 0.094 147.33 99.3 146.48 96	α α υ	0 • 0 40 • 0 40	9. 4 5. 1	• • • •	9•1 100		66 . 92 72.69	97•1 97•1	64•67 70•44	642 695	3645 3953 8	4505. 4889.
SR 0.094 147.33 99.3 146.48 9	а N N N	• 1 • 4 1 •	66• 4 74• 6	• • • •	64 • 9 7 3 • 1	0.0 0 0 0	152.48 160.63	91.9 91.0	140•10 148•25	1535 . 1611.	8562 . 8997.	10488. 11029.
0+094 154+62 99+3 153+76 9	ဖပ	0•094 0•094	147•33 154•62	ოო • ი ი ი ი ი ი	146.48 153.76	96•7 1 96•7 1	138.91 146.19	94 94 94	131.78 139.06	1361 . 1428.	7668. 8056.	9442 9442

ROT.	с	PERCENT TOPSOIL LOST/YR	THE VIEL AND THE YR 1	LC REMAI E VEARLY YEAR	INING (AS Return 2 10	TO LAND YEAR	THE IN AND WA 1000	I T I AL NAGEME YE	VIELD) Nt For Ar 200	PRESE PROFIT	NT VALUE Stream 100	TO YEAR 200
U	К U	0.135 0.135	■6•70 ■2•85	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	=7•00 =3•16	99 90 90	■9.55 ■5.71	926 926	■12•02 ■8•18	• ● 9 00 9 00 1 ■	1 419. 1 215.	1 2 2 2 2 2 2 2 2 3 2 3 3 3 3 3 3 3 3 3
S	в с	0.104 0.104	■4	50 0 0 0 0 0 0	-4.57 -2.74	96 • 4 96 • 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	93•6 53•6	₹ 6 00 8 4 6 8 4 6	14 14 14 14 14 14 14 14 14 14 14 14 14 1	-259. -162.	#335. #214.
3	αu	0•031	9•83 12•09	99•6 99•6	9.78 12.05	98• 6 98• 6	9•31 11•58	97•6 97•6	8.84 11.10	91. 112.	513. 634.	632. 782.
H/d	a S	0•004	22.84	69.7	22.83	99 • 5	22.75	99.4	22.67	212.	1215.	1511.
œ	ъ	0•000	3.14	9 ° 65	3.14	99 • 4	3.12	99 . 2	3.10	29.	167.	207.
CIS	αυυ	0.115 0.115	4•21 7•04	₽ 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	3 • 99 6 • 82	96. 1 96. 1	2•03 4•93	93•1 93•1	0• 30 3• 13	0 6 6 6 6 6 6 6	178. 329.	196. 384.
C/W	ဇူဂ	0 • 0 8 3 0 • 0 8 3	12•09 15•14	000 000 44	11•90 14•96	0 • 1 6 0 • 1 6	10•24 13•29	94•7 7•49	8.67 11.72	111.	604. 767.	730. 932.
s/w	κυ	0+052 0+052	6• 86 8• 90	0 0 0 0 0 0 0 0 0 0	6•78 8•83	97.9 97.9	6•10 8•15	0,0 0,0 0,0 4,4	76 44 44 49	63 . 82.	349 458	425 561
C/S/W	к К С	0+073 0+073	9.36 11.98	999 •99 4	9•22 11•84	E•16	7.97 10.59	₽ 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	6.78 9.40	86. 110.	469 608	567. 740.
IRRIG	RRIGATED	CROP	ROTATIONS									
υ	a n	0+135 0+135	136•49 146•14	99•2 99•2	35 •1 4 44 •7 9	95• 5 95• 5 95	123•67 133•31	92 • 0 92•0	112•56 122•20	1258.	6992. 7506.	8547• 9187•
S	αυ	0•104 0•104	98.50 105.16	₩ 900 900	97•76 04•41	96 4 96 4	91•22 97•87	93•6 93•6 6	85•06 91•72	909. 971.	5090 5445	6248. 6689.
3	αu	0•031 0•031	69.40 75.17	966 99•6	69.22 74.99	98• 6 98• 6	67•45 73•22	97•6 97•6	65 ° 64 71•41	642 695	3657. 3964.	4527. 4910.
c/s	ဖို့ဂ	0.115 0.115	166•51 174•65	11 10 10 10 10 10 10 10 10 10 10 10 10 1	65•35 73•50	96 • 1 1 96 • 1 1	155•27 163•42	93 •1	145.74 153.89	1537. 1613.	8627. 9061.	10602.
C/S/W	к К С	0+073 0+073	147•35 154•54	99•4 99•4	46• 69 53• 97	97•3 1 97•3 1	140•64 147•92	р •96 •96	134•86 142•14	1362. 1429.	7707. 8095.	9510. 9993.

TABLE 32. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES LFSL.

	Ш	L LL	A N U	N TNG 1	*	1001		c U			l
				RETURN 10	TO LAND YEAR		ANAGEMEN	AT FUR AR 200	PROFIT 10	NT VALUE Stream 100	TO YEAR 200
#21. 33 99.2 #17.4 9 99.2	• • 666 866	00	▼ ■	-21.56 17.73	95• 6 95•	-23.55	92•1 92•1	=25.47 =21.63	•199• •163•	=1185. =980.	1 502 1 247
# #5+ 02 # #5+ 02 # # 30+ 00 90+ 3	999 999 •	00	-	=5 = 12 = 29	96•4 96•4	#5.97	5.85 5.85	∎6.78 ∎4.95	• 4 4 • 00	-288. -191.	=370. =249.
0+25 2+52 29+6	5 99 8	• •	10.10	0•21 2•48	98• 5 98• 5	-0.15 2.11	97•6 97•6	-0.53 1.74	0 0 0 0	5. 126.	151•
6•67 99•'	- 66 -	б	~	6.66	99 • 5	6.61	99.4	6.54	62.	354.	440.
4.17 99.6	₹ 99 .	•	5	4.17	99 . 4	4.14	99•2	4.12	•6 E	222.	275.
1 1 5 1 1 9 9 9 1 1 1 1 1 1 1 1 1 1	1 999 •	••		=5•30 =2•46	96 • 1 96 • 1	16.87 14.04	0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	₩ 10 10 10 10 10	=311. =160.	-408 -220
#2*20 99*4 0*85 99*4	• 6 6 6 • 6	00		-2.35	97•0 97•0	- 3.65 -0.60	94 94 8 8 8	#4.88 #1.83	=21. 7.	-148. 14.	1 202
1•27 99•5 3•32 95•5	•56 •56	6 5		1•21 3•26	97•9 97•9	0.63 2.67	96 96 4 4	0•05 2•10	11. 30.	54. 163.	59. 195
•0•60 2•02 99•4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00		-0+71 1+91	97 • 3	1. 73 0.89	ຕ ຕ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ ຍ	■2•70 ■0•09	18• 18•	∎ 556 84•	
OTATIONS	S										
129.06 99.2 119.42 59.2	• • 66 5 6 9	• • •		29 69 20 05	95 95 95	35.02 25.37	92•1 92•1	* 40•16 ■30•51	-272. -183.	* 1679. * 1165.	-2161 -1522
137 •31 99•3 130 •66 99•3	1 99•	00	11	-37 • 60 -30 • 94	96 4 4 6 6 8 4	•40•13 •33•47	₹ • £6 2 • 5	•42•51 •35•86	1047 285 •	#2049 #1694	=2584 =2143
=29.90 99.6 =24.13 99.6	•66 66 0	00	8 F	29 . 98 24 . 21	98• 6 98• 6	-30,77 -25,00	97•6 97•6	=31,58 =25,81	=277 =224	- 1611. - 1304.	-2017. -1634.
59,95 11,111 12,95 59,33	1 99. 6 59.	00	4	11.62 =3.47	96 •1 =	•15•99 •7•84	0.0 0.0 0.0	=20.12 =11.97	∎105. ∎30.	-668. -264.	*928 •387
#10.58 99.4 #3.30 99.4	8 66 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	00		10-88 -3-59	• 24• 3 • 24• 3	•13•52 •6•24	២ ភ្ ១ ឆ្ ១ ឆ ១ ឆ ១ ឆ ១ ១ ០ ០	-16+05 -18+77	** 668 **	-627	#816 #333

TABLE 33. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MADI.

TABLE 34. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MAI3.

ROT.	đ	PERCENT TOPSOIL LOST/YR	THE YIE AND TH YR 1	LO REN E VEAR YE	AINING (AS Ly Return Ar 10	TO LAN YEA	DF THE I VD AND M VR 100	NITIAL ANAGEME YE	YIELD) NT FOR Ar 200	PRESE PROFIT 10	NT VALUE Stream 100	TO YEAR 200
υ	802F	0.406 0.406 0.223 0.223	121.38 17.55 17.55 128.99	00000 00000 00000 00000	*22*07 *22*07 *22*38 *32	87•7 87•7 93•3 93•4	-24.07 -24.07 -30.77	00000 0000 00000 00000	44 445 441 441 44 44 46 75 75	102 166 1270 1270	11223 11258 11527 1433	1703 1449 1942
S	a ne	0•313 0•313 0•172 0•167	100 100 100 100 100 100 100 100 100 100	00000 00000 00000 0000	1500 1500 1500 1500 1500 1500 1500 1500	8 • 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100-14 100-14	ທີ່ທີ່ດີດ		4 m 0 4 8 m 1 4	00000 0000 0000	4 M Q Q
3	a tr	0000 •••• 0000 44000 4400	111-61 11-61 11-61	២ ២ ២ ២ ២ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១	11111111111111111111111111111111111111	96•7 96•7 98•0	1111 1000 1100 1100 1100 1100 1100 110	0000 4400 0040	0000 0000 0000 11 11	11 1000 1400 1400		40.0M
H d			່ອນດ_ ••••	000	•••	000	400	800	m o vo • • •	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	351 . 216. 246.	
s V V	A ROOME	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	411160 100 100 100 100 100 100 100 100 10	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.72 3.72 11.5.69 11.71 15.81	0 0044 0 0044 0 00444	3.66 10.05 12.43 11.243	00800 00800 00800 00800	111 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 11 11 11 11 11 11 11 11 11	197 1979 1973 191	111 00040 00040 00040
X V	a PP	0.250 0.250 0.138 0.133	1 5.75 12.70 16.28	00000 00000 00000	160 160 160 160 160 160 160 160 160 160	0000 0000 0000 0000	1120 338 120 328 120 328	00000 00000 00000 0000	114 14 14 14 14 14 14 14 14 14 14 14 14	00-00 0-00	8000 9477	ONNA NNNA
NIS	SC SR	0.156 0.156 0.086 0.086	12.25 12.65 12.65 12.65	00000 00000 ••••	888 888 888 888 888 888 888 888 888 88	95.0 95.0 97.0 97.0	0080 0000 0000 0000 0000 0000 0000 000	00000 0044 ••••	1480 1480 1480 1480 1480 1480 1480 1480	*22 *33 *18	100 100 100 100 100 100 100 100 100 100	MAND
MISI	a ora	0.219 0.219 0.120 0.117	100 100 100 100 100 100 100 100 100 100	0000 0000 0000	111 000 0400 0400 0400	0000 0000 0000 4400	1111 1111 1111 1111 1111 1111 1111 1111 1111	88890 9609 9999 4480	1000 1000 1000 1000 1000 1000 1000 100	1 0 0 0 4 4 4 4	# # 881 4821 4621	8881 1904 1904 1904 1904 1904 1904 1904 190

TABLE 34. (CONTINUED). IRRIGATED CROP ROTATIONS

ROT.	СР	PERCENT TOPSOIL LOST/YR	THE YIEL AND THE YR 1	О Тату Тату Гату Стату	AINING (AS Ly Return Ar 10	TO X YEA	AR 100	INITIAL MANAGEMEN YEJ	YIELD) Nt for Ar 200	PRESE PROFIT 10	NT VALUE Stream 100	TO YEAR 200
υ	a tr	0.406 0.406 0.223 0.213		ᲝᲝᲗᲗ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ Გ	**************************************	88000 NV 900 NV 900	4 4 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	88000 99000 99000	1111 100 100 100 100 100 100 100 100 10	-279 -190 -389	10000 111000 111000 10000	120052. 120052. 120052.
S	A LE	0+313 0+313 0+172	# 37,38 # 30,72 # 48,21 # 49,66	0000 0000 000 000	=38=23 =31=57 =48=71 =60=15	00044 0044 0007+	145.08 150.96 170.96	75 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	•••••••••••••	111 1200 1200 1200 1200 1200 1200 1200	2158 1803 12572	-2801 -2801 -2359 -2359 -2951 -2951
3	Rotz	0000 0000 0000 44000	129-92 124-15 150-15 100-15	00000 00000	1	966 7 976 97 98 0	1000 1000 1000 1000 1000 1000 1000 100	0000 4400 ••••	1111 1111 1111 1111 1111 1111 1111 1111 1111	1228 1228 1373	1647 1339 12031	12080 1697 125543
crs	s of the second	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53 11-53	0000 0000 0000 0000	115 120 120 120 120 120 120 120 120 120 120	88866 96866 9644 9644	126.80 126.80 128.79 123.12	700 888 1998 1998	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	* 111 * 214*	8 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 321 7 80 1 696
C/S/¥	S S S S S S S S S S S S S S S S S S S	0.219 0.219 0.120 0.117	10.65 10.65 11.28 121.65	0000M 00000 00000	111.52 111.52 121.78 221.78	0000 0000 0000 0000 0000	118-51 124-53 124-23	99999 99999 99999 9999 9999	0000 M000 ••••• ••000 N000 1111		#741 #353 #1142 #879	•1023 •540 •1474

,

ROT.	в С	PERCENT TOPSOIL LOST/YR	THE VIELD AND THE VR 1	<u>~</u> ~	TEMAINING (AS A ARLY RETURN TO YEAR 10	TO LAND YEAR	THE AND 100	INITIAL YIELD) Management for Year 200	T FOR 7 200	PRESENT PROFIT ST 10	VALUE REAM 100	E OF A TO YEAR 200
н/ч	SR	0.029	6.55	99•6	6+62	98•7	6.25	97 • 8	5.86	62 .	346.	426.
α	SR	0+043	3+73	99 • 5	3•71	98•2	3+58	96.9	3•44	34•	195.	241.
RIG	IRRIGATED	CROP ROTATIONS	TATIONS									
S	α ν υ	0•714 0•714	■53•38 ■46•72	E • 16	∎54•88 ∎48•22	67•7 = 67•7 =	-76. 26 -69.61	25 . 0- 1 25 . 0- 1	0-107.03 0-100.38	5 01.	=3186 =2831	-4445 -4004
3	α ωυ	0.214 0.214	-46•49 -40•72	98 98 98 98 98	-46.94 -41.17	00 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	- 50.55 -44.77	8 6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	- 54.99 -49.22	- 600 - 600 - 600	=2566. =22559.	3246 2863

TABLE 35. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MA35.

TABLE 36. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MK01.

C SR 0.207 -21.43 93.7 -24.61 37.3 -24.26 -190.6 -190.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -120.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 -1200.6 <th< th=""><th>ROT.</th><th>G</th><th>PERCENT TOPSOIL LOST/YR</th><th>THE YIE AND TH</th><th>E V REM Y E A R</th><th>AINING (AS Ly Return Ar 10</th><th>TO KAO YEAN</th><th>P THE I</th><th>NITIAL ANAGEMEN YEA</th><th>YIELD) Nt for Ar 200</th><th>PRESE PROFIT 10</th><th>NT VALU Stream 100</th><th>E DF A TO YEAR 200</th></th<>	ROT.	G	PERCENT TOPSOIL LOST/YR	THE YIE AND TH	E V REM Y E A R	AINING (AS Ly Return Ar 10	TO KAO YEAN	P THE I	NITIAL ANAGEMEN YEA	YIELD) Nt for Ar 200	PRESE PROFIT 10	NT VALU Stream 100	E DF A TO YEAR 200
5 5 0.160 -7.72 99.1 -7.05 94.9 -9.99 90.6 -10.415 -7.72 -45.03 94.9 -7.17 90.6 -10.415 -7.72 -4439 -7.72 -4439 -5.5 -439.1 -5.03 93.1 -0.93 2.22 -1120 -1439 -55.6 -416 99.4 6.57 99.2 6.418 62.2 -23.1 120 -4110 39.6 -11.52 -43.03 -23.1 121 -1439 55.1 -23.1 121 -1439 55.1 -23.1 121 -24.1 120 39.5 -4115 39.5 -4116 39.4 56.1 39.4 56.4 39.5 -4116 39.5 -4116 39.5 -4116 39.5 -4116 39.5 -416.5 39.4 221 -221 -400.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5 -416.5	υ		• 50 • 50	21•3 17•5	0 0 0	21•7 17•8	N.N. M.M.	24•6 20•7	* * N-N-	28•0 24•2	169	1209	1 546. 1 292.
% \$ 0.0048 2.52 99.6 0.017 2.52 99.6 1.35 233 % \$ 0.0006 6.67 99.6 6.65 99.4 6.57 99.6 1.35 233 % \$ 0.010 4.17 99.6 4.16 99.3 4.113 99.0 4.10 39.5 533 333 % \$ 0.0175 -5.67 99.6 4.16 99.3 4.113 99.0 4.10 39.5 221.6 % \$ 0.0175 -5.676 99.1 -6.03 99.6 -11.65 -5.33 399.6 -11.65 -5.35 -2400 % \$ 0.0125 -5.676 99.2 -4.13 97.1 -1.613 97.1 -1.65 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -1.25 -2.25 -2.25 -2.25 -1.25 -2.25 -2.25 -1.25 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -2.25 -	S	а С С	•16 •16	7.7	0.0	₹ • 0 • 0	44	8•9 7•1	00	- 0 - 0 - 1	220	4 6 7 7 7 7 7 7	#562 #441
/H SR 0.006 6.67 99.4 6.57 99.2 6.448 62. 353. R SR 0.0175	3	ຮູບ	• • •	N IO • •		••	ພື້ພື້	0 •	• • •	0 M 0 H	N P	NO N	-7- 143-
R 0.010 4.17 99.6 4.13 99.0 4.10 39. 221. X 2 0.175 -5.57 99.1 -4.16 94.5 -0.13 89.6 -11.52 -563 -257 X 5 0.175 -5.57 99.1 -4.05 94.5 -0.13 89.6 -11.52 -563 -257 X 5 0.175 -5.21 99.2 -4.13 99.6 -11.52 -563 -2567 X 5 0.0128 -2.21 99.2 -4.13 99.4 -7.2 -165 -263 -224 -165 -226 -126 X 5 0.0122 -1.018 99.4 96.2 -0.10 0.10 4.12 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 <t< td=""><td>H</td><td>SR</td><td>• 00</td><td>•</td><td>• 5</td><td>Q</td><td>6</td><td>ີ ເມື</td><td></td><td>4</td><td>N</td><td>m D</td><td>438•</td></t<>	H	SR	• 00	•	• 5	Q	6	ີ ເມື		4	N	m D	4 38•
V SR 00.175 -66.66 99.6 -11.52 -65.3 -56.30 99.6 -11.52 -263 -267 V SR 00.128 -2.81 99.2 -2.84 95.7 -11.52 -56.30 99.6 -11.52 -263 -267 V SR 00.128 -2.81 99.2 -2.44 95.7 -11.35 92.4 -5.13 72 -165 V SR 00.128 -0.823 99.4 -7.73 97.1 -11.61 92.4 -22 -165 -122 V SR 00.112 -1.051 99.4 -7.73 97.1 -11.65 94.9 -1.055 -122 -122 -122 SV SR 00.112 -1.01 99.3 7.1 -10.65 93.3 -46.5 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -122 -12	α	SR	+ 01	•	в		•6	•	•	• 1	φ.	51	275.
VW SR 0.1128 -2.2 10.128 -2.2.44 95.7 -11.30 92.4 -5113 -22. -165. VW SR 0.080 -0.813 99.4 97.1 -11.30 92.4 -3113 -22. -165. VW SR 0.080 -0.823 99.4 -0.133 97.1 -11.46 94.9 -11.95 -32. -32. SvW SR 0.0112 -11.61 99.3 -11.72 97.1 -10.89 94.99 -11.95 -32. -32. SvW SR 0.0112 -11.01 99.3 -11.72 97.1 -10.89 94.99 -11.95 -32. -32. SvW SR 0.0112 -11.01 99.3 7.7 -5.04 93.3 -4.65 -122. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. -32. </td <td>S/S</td> <td>s К</td> <td></td> <td>40 90</td> <td>0 0</td> <td>0 0 0 0</td> <td>44</td> <td></td> <td></td> <td>11+5 -8+6</td> <td>10 M</td> <td>408 257</td> <td>∎539. ∎351.</td>	S/S	s К		40 90	0 0	0 0 0 0	44			11+5 -8+6	10 M	408 257	∎539. ∎351.
VW SR 0.080 -0.23 97.1 -1.16 94.9 -1.95 -3. S/W SR 0.1112 -1.011 99.3 -1.072 97.1 0.86 94.9 0.105 16. 77. S/W SR 0.1112 -1.011 99.3 -1.078 96.2 -3.26 93.3 -4.655 -1.65 -1.22 -1.22 S/W SR 0.1112 1.011 99.3 -1.064 93.3 -2.064 93.3 -2.064 93.3 -2.064 93.3 -2.064 93.3 -2.204 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.286 93.7 -2.064 93.3 -2.064 93.3 -2.064 93.3 -2.064 93.3 -2.064 93.3 -2.128 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1.228 -1	*	к К	.12	0 0 0 0	00	40 40	ທີ່ທີ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N.N		25	10 U 10 U 11 U	=231. =28.
S/W SR 0-112 -1-61 99-3 -1-78 96-2 -3-26 93-3 -4+65 -16 -122 RRIGATED CROP ROTATIONS		ဇ္ဂဂ	• 0 8 0 8 0 8	0.0	00	50 H	~~	1 • 1 0 • 8	44	1 • 9 0 • 1	mю	AN EN	∎ 552 84•
RRIGATED CROP ROTATIONS C SR 0.207 =47.53 99.9 =48.34 93.7 =55.16 87.3 =53.32 =444.4 =2700. C C 0.207 =47.53 99.9 =48.34 93.7 =55.16 87.3 =53.32 =444.4 =2700. S C 0.2017 =47.53 99.9 =48.97 90.6 =53.68 =354.4 =2780.4 =2186.4 S C 0.160 =455.20 99.1 =38.95 94.9 =48.97 90.6 =45.75 =2186.1 =2491.4 S C 0.0160 =38.54 1.456.60 94.9 =42.32 90.6 =453.42 =2186.1 =2491.4 =2491.4 =2491.4 =2491.4 =1621.4 =1621.4 =1621.4 =11621.4 =278.6 =2136.6 =2244.8 =11621.4 =278.6 =11621.4 =278.6 =11621.4 =278.6 =11621.4 =278.6 =11621.4 =278.6 =11621.4 =1274.6 =11571.6 =1274.8 =1274.8 =11571.6 =1274.6 =1277.6	S/#	α α	• 11 • 11	1+0 0	• • • •	N 0 • 0	è è	0 0 0 0 0	mm	40 ••	1 6 9	122	#171. 2.
C SR 0.207 -47.53 98.9 -48.34 93.7 -55.16 87.3 -53.32 -444. -2700. C C 0.207 -37.85 98.9 -45.51 87.3 -53.32 -444. -2700. S C 0.207 -37.85 99.1 -45.51 87.3 -53.68 -354. -2186. S C 0.160 -455.20 99.1 -45.65 94.9 -442.32 90.6 -52.41 -420. -2491. S C 0.0048 -29.90 99.1 -31.23 96.6 -32.42 -2749. -1521.43 % S 0.0048 -29.90 99.1 -31.23 96.6 -32.42 -2749. -1521.43 % S 0.0048 -29.90 99.1 -31.23 96.6 -32.42 -2749. -1521.44 % S 0.0175 -18.71 99.6 -32.42 -2748. -1521.44 -176. -1137. % S 0.0175 -18.71 99.6 -32.66 -224.8<	RRIG	<	CROP R	TATION									
S R 0.160 -45.20 99.1 -45.60 94.9 -448.97 90.6 -52.41 -420. -2491. W SR 0.0160 -335.54 99.1 -38.95 94.9 -442.32 90.6 -55.41 -420. -2491. W SR 0.048 -29.90 99.5 -30.03 98.1 -31.23 96.6 -35.42 -278. -278. -2136. W SR 0.048 -29.90 99.5 -30.03 98.1 -31.23 96.6 -35.42 -278. -278. -1314. V C 0.0048 -29.90 99.5 -31.23 96.6 -35.42 -278. -1314. SR 0.175 -18.71 99.3 -27.55 94.55 -33.22 899.6 -399.26 -1376. -11374. S/W SR 0.112 -21.43 99.3 -21.84 96.2 -256.42 93.3 -228.7 -1228. S/W SR 0.112 -14.14 99.3 -14.56 96.6 23.3 23.3 <t< td=""><td>υ</td><td></td><td>00 00 00</td><td>47•5 37•8</td><td>ຕົ້</td><td>4 0 0 0 0 0 0 0</td><td>NN MM</td><td>55.1 45.5</td><td>* * ~ ~</td><td>00 00 00 00</td><td>440 440</td><td>2700 2186</td><td>=3457. =2817.</td></t<>	υ		00 00 00	47•5 37•8	ຕົ້	4 0 0 0 0 0 0 0	NN MM	55.1 45.5	* * ~ ~	00 00 00 00	440 440	2700 2186	=3457. =2817.
W SR 0.048 -29.90 59.5 -30.03 98.1 -31.23 96.6 -32.42 -278. -11314. C 0.0048 -24.13 99.5 -24.26 98.1 -25.46 96.6 -26.65 -278. -11314. /S SR 0.175 -26.86 99.1 -27.55 94.5 -33.22 89.6 -39.26 -274. -11314. /S C 0.175 -26.86 99.1 -27.55 94.5 -33.22 899.6 -399.26 -1137. S/W SR 0.1175 -21.43 99.3 -21.84 96.2 -25.07 89.6 -39.28.79 -1137. S/W SR 0.112 -114.14 99.3 -21.84 96.2 -25.42 93.3 -228.79 -1228. S/W C 0.112 -114.14 99.3 -14.56 96.2 -256.42 93.3 -228.79 -1228. S/W C 0.112 -14.64 96.2 -256.42 93.3 -216.51 -123.9 -884.0. S/W </td <td>S</td> <td>ဖို့ဂ</td> <td>•16 •16</td> <td>45• 2 38• 5</td> <td>00</td> <td>45•6 38•9</td> <td>44</td> <td>0 M 0 M</td> <td>•••</td> <td>50 40 44</td> <td>4 20 0 5 9</td> <td>2491 2136</td> <td>=3146. =2705.</td>	S	ဖို့ဂ	•16 •16	45• 2 38• 5	00	45•6 38•9	44	0 M 0 M	•••	50 40 44	4 20 0 5 9	2491 2136	=3146. =2705.
/5 SR 0.175 =26.86 99.1 =27.55 94.5 =33.22 89.6 =39.26 #1571. C 0.175 =18.71 99.1 =17.45 94.5 =35.07 89.6 =39.26 #1571. S/W SR 0.175 =18.71 99.1 =176. #1137. S/W SR 0.112 =21.43 99.3 =21.84 96.2 #25.42 93.3 #28.79 #200. #1228. S/W C 0.112 =14.14 99.3 =14.56 96.2 #25.42 93.3 #216.51 =1228.	3	а Кос	• • • •	29•9 24•1	00	00 • • • • • •	000 •••	31•2 25•4	00	32•4 26•6	224	1621	=2035. =1652.
5/W SR 0+112 =21.43 99+3 =21.84 96+2 =25+42 93+3 =28+79 =200+ =1228+ C 0+112 =14+14 99+3 =14+56 96+2 =18+13 93+3 =21+51 =133+ =840+	~	a R N	• 1 7 • 1 7	26•8 18•7	00	27•5 19•4	44 ••	50° 50°	66	31•1 31•1	252	1571	=2034. =1493.
	S/W	s Я	•11	21•4 14•1	6	21•8 14•5	N N • •	25• 4 18• 1	mm	28.7	200	1228 1228	1577

68

τ.

TABLE 37. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MK13.

474 -30.63 98.1 -31.19 84.8 -33.14 35.1 -56.00 -286. -175. -2373. 355 -774 98.1 -31.19 84.8 -33.44 35.1 -56.26 -1552. -2073. 3555 -57.91 98.4 -6.21 89.2 -10.55 66.1 -14.08 -575. -517. -512. 100 2.24 99.4 -6.21 89.2 -10.55 66.1 -14.08 -673. -512. 100 2.24 99.4 -6.51 99.2 -10.25 65.1 -14.08 -613.4 -512.2 1015 6.67 99.4 -4.09 98.2 -10.15 93.4 -21.16 93.4 -21.16 93.4 -21.2 93.4 -21.2 93.4 -21.2 93.4 -21.2 93.4 -21.16 93.4 -116.9 -73.4 -116.9 -73.4 -10.5 -10.35 -10.35 -27.4 -10.5 -27.3 -27.3 -27.3 -27.3 -27.3 -27.3 -27.3 -27.3 -27.3 -27.3		RCENT PSOIL ST/YR	THE YIEL AND THE YR 1	D REMA YEARL Yea	INING (AS Y RETURN T R 10	A X OF O LAND YEAR	F THE INI D AND MAN	TIAL Y Agemen Yea	IELD) T For R 200	FRESE PROFIT 10	NT VALUE Stream 100	TO YEAR 200
65 -7,74 98.4 -89.2 -80.55 66.1 -16.81 -7.3 -4.71 -512 09 2.55 99.3 2.61 14.98 -5.65 93.4 -5.15 -4.71 -5.12 09 2.65 99.3 2.61 93.4 -2.16 93.4 -5.16 93.4 -5.15 -374. -5.12 15 6.67 99.6 4.16 98.9 4.09 98.7 6.24 351. 434 22 4.17 99.6 4.16 98.9 4.09 98.7 6.24 351. 434 22 4.17 99.6 4.16 98.9 4.09 98.7 6.24 351. 434 22 4.17 99.6 4.16 98.9 4.09 98.7 6.24 52.6 351.6 434 21 -12.89 98.7 -14.62 91.4 -17.35 57.6 -27.63 -10.35 -10.35 21 -12.89 97.9 -14.62 91.4 -11.62 -23.6 -473 -11.6 -473 <th>00</th> <th>47 47</th> <th>30•5 26•6</th> <th>6 0</th> <th>10 10 10 10 10</th> <th>4.4 0.0</th> <th>34 °S 33 • 4</th> <th>ເດິດ</th> <th>00 00 00 00</th> <th>286 250</th> <th>1757</th> <th>2329</th>	00	47 47	30•5 26•6	6 0	10 10 10 10 10	4.4 0.0	34 °S 33 • 4	ເດິດ	00 00 00 00	286 250	1757	2329
09 0.24 95.3 1.21 96.2 1.21 95.4 -15 115 15 6.67 99.6 5.65 99.2 6.45 98.7 6.24 62. 351. 434 22 4.17 99.6 4.16 98.9 4.09 98.2 4.01 39. 220.3 73.4 22 4.17 99.6 4.16 98.9 4.09 98.2 4.01 39.2 220.2 273 01 -12.29 98.3 -12.82 97.4 -11.60 -220 273 210.4 01 -12.29 98.3 -12.82 97.4 -11.60 39. 220.2 273 92 -17.88 98.3 -17.65 57.6 -30.47 -1106 -759 -434 92 -17.88 98.3 -11.66 -18.63 -7603 -6689 -6689 92 -10.80 91.4 -11.69 78.65 -14.63 -10.66 -475 -4986 -4986 -4986 -4986 -756 -4986 -4986 -49		36 36	N 0		00 0 0 0	0.0	10.5	• • 0 0	16 • 9 16	200	471 374	634 512
15 6.67 99.6 5.65 99.2 6.45 98.7 6.24 62. 351. 434 22 4.17 99.6 4.16 98.9 4.09 98.2 4.01 39.2 220. 273 01 -12.23 99.6 4.16 98.9 4.09 98.2 4.01 39.2 220. 273 92 -9.45 98.3 -12.82 87.9 -117.35 57.6 -27.6 -759. -608. -8489 92 -9.45 91.4 -11.91 78.6 -18.25 -756. -759. -608. -608. -493 92 -1.80 99.2 91.4 -11.91 78.6 -18.25 -756. -759. -693 -9345. -935. -756. -759. -693 -693 -693 -693 -693 -693 -693 -693 -693 -693 -693 -693 -693 -759 -1035 -759 -1035 -759 -1035 -759 -1035 -759 -1035 -759 -759 -759 <t< td=""><td></td><td>10</td><td>N IN</td><td>• • •</td><td></td><td>00</td><td>0.0 1 1 1</td><td>m m</td><td>2 • 1 0 • 1</td><td>NM</td><td>010</td><td>00 10</td></t<>		10	N IN	• • •		00	0.0 1 1 1	m m	2 • 1 0 • 1	NM	010	00 10
22 4.17 99.6 4.16 98.9 4.09 98.2 4.01 39. 220. 273 01 -12.29 98.3 -12.83 57.6 -27.63 -116. -759. -1036 92 -77.88 98.7 -88.32 91.44 -11.91 78.6 -18.25 -57.65 -90.6 -6089 -1035 92 -77.88 98.7 -88.32 91.44 -11.91 78.6 -18.25 -759. -6589 -1035 92 -77.88 98.7 -88.85 91.44 -11.91 78.6 -18.25 -759. -759. -6589 -1035 92 -10.80 99.0 -0.45 94.3 -20.17 899.2 -41.03 -477. -3455. -4345. -435 82 -0.25 99.0 -0.45 99.2 -11.99 78.6 -12.83 -55.4 -435 -435 -435 -435 -54.4 -433 -12.25 -495 54.4 -433 -226 -495 -54.4 -435 -4355 -4956 -49	-	01	Ś	• 6	• 6	.	4	.	Ň	N.	51	4 E
01 -12.29 58.3 -12.82 87.9 -117.35 57.6 -27.63 -116. -759. -1035 92 -47.88 98.7 -9.99 87.9 -11.91 78.6 -18.26 -759. -608. -1035 92 -47.88 98.7 -98.32 91.44 -11.91 78.6 -18.26 -75.27 -91.45 -94.3 -81.8.26 -487. -105. -608. -8487 92 -47.88 98.7 -55.27 91.44 -11.91 78.6 -18.26 -4875 -56.89 -4875 -56.89 -4875 -56.89 -6897 -4875 -56.89 -4875 -56.89 -4875 -55.99 -54.8 -4956 -15.21 -53.22 -19.99 -255. -4995 -4956 -55.93 -55.93 -55.93 -55.93 -55.93 -15.99 -255.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93 -55.93	0	02	-	•6	•		Ö,	å	•	σ	20	53
92 T 7.88 98.7 T 8.32 91.4 T 1.91 78.6 T 8.26 T 75. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. 508. <	00	4 4 0 0	12 2 9 4		00 00 10	00 • • •	17•3	~~	30•4 27•6	116	759 608	1035 1848
82 -0.25 94.3 -1.17 89.2 -4.03 -55. 82 1.80 99.0 1.59 94.3 -1.2.17 89.2 -4.03 -55. 55 -5.55 98.8 -5.90 92.4 -88.69 83.0 -112.83 -54. 43 55 -2.93 98.8 -5.90 92.4 -88.69 83.0 -112.83 -55. 495 55 -2.93 92.6 -88.69 83.0 -112.83 -53.2 -496 8071ATIONS -2.263 -3.226 -3.226 -3.226 -3.226 -3.365 -4.436 65 -61.32 98.8 -5.10 92.4 -6.796 666.1 -7.263 -3.226 -3.320 65 -61.32 98.2 -61.30 89.2 -61.30 -2.265.4 -4.95 65 -54.6670 666.1 -82.72 -510.7 -3407 -3407 65 -54.6670 99.2 -42.95 93.4 -50.65 -3431 -2524 -3909 99 -466.70		50 50		ωœ	0.0 0.0	44	11-9 -8-9	00	15.0	440	00 04 00 04 0	689 487
55 15 , 55 98.8 5 , 98.8 6		18 18 18 18 18 18 18 18 18 18 18 18 18 1	0 • 0 8 0	.	0	44	2.1	00	4 • 0 • 4	mo	00 00	0 4 M M
R0TATIONS 65 66.1 82.72 571. 3407. 4351 65 54.66 98.4 55.38 89.2 61.30 66.1 82.72 510. 3407. 4351 65 54.66 98.4 55.38 89.2 61.30 66.1 82.72 510. 3052. 3309 09 446.70 96.2 448.72 93.4 50.62 4431. 2524. 3169 09 440.77 99.3 442.95 93.4 450.62 4431. 2524. 3169		202	00 00	00	6 0 9 0 9 0	NN	8•6 6•0	m m	12•8 10•2	50 10 10	59 59 59 59 59 59 59 59 50 50 50 50 50 50 50 50 50 50 50 50 50	325 322
-365 -61,-32 58.4 -62.03 89.2 -67.95 66.1 -82.72 -571.6 -3407.6 -4351 -365 -54.65 98.4 -55.38 89.2 -61.30 66.1 -72 -510.6 -3052.6 -3909 -109 -466.47 99.3 -406.93 96.2 -448.72 93.4 -50.62 -431.6 -2524.6 -3169 -109 -400.73 99.3 -40.93 96.2 -448.72 93.4 -50.62 -431.6 -25224.6 -3169 -109 -400.73 99.3 -40.93 96.2 -442.95 93.4 -50.62 -431.6 -25224.6 -3169	Ð	R0P R0	TATIONS									
•109 #46.47 99.3 #46.70 96.2 #48.72 93.4 #50.62 #431. #2524. #3169 •109 #40.73 99.3 #40.93 96.2 #42.95 93.4 #44.85 #378. #2217. #2787		99 8 8	51. 54.6	0 0 0	90 90 90 90 90	0 0 0 0	57•9 61•3	00	82•7 76•0	571 510	3407	4351 3909
	* *	100	46.4 40.4	• • •	46 • 7 • 0 • 9	NN ••• ••	40.7	m m	50 • 0 • 0 • 0	431	2524	3169 2787

TABLE 38. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MK35.

C 5;R 1,232 735,72 25,0 055,664 735,17 35,1 1,234 74,130 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,131 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,141 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111 745,111	R0T.	đ	PERCENT TOPSOIL LOST/YR	THE VIELC AND THE YR 1	YEAR Year Ye	AINING (AS Ly Return Ar 10	TO LA	AR 100	INITIAL MANAGEMEI YE	VIELD) Nt for Ar 200	PRESE PROFIT	NT VALU Stream 100	E OF A To vear 200	
SR 0.948 -113.73 96.7 -114.29 SR 0.3548 -211.990 98.67 -225.65 229.563 SR 0.3548 -229.559 98.67 -227.553 98.7 -229.746 SR 0.3288 -229.559 98.67 -229.563 98.67 -229.563 SR 0.2884 -55.0 229.553 99.65 -11.290 99.3 -11.123 SR 0.2884 -55.0 13.523 99.3 13.523 99.3 -11.293 SR 0.0038 50.017 99.65 10.2455 91.66 66.471 79.55 10.0283 SR 0.0038 50.017 99.65 511.090 99.35 10.0283 10.0283 SR 0.00135 50.017 99.65 511.090 99.35 10.0293 10.0283 SR 0.0013 50.017 99.65 511.090 99.65 11.1290 10.0293 SR 0.0013 50.013 99.65 511.080 99.65 11.1990 10.0293 SR 0.0013 <t< td=""><td>U</td><td></td><td>0044 0044</td><td>6004 6004 6004 6004 6004 6004 6004 6004</td><td>សហេត្ត</td><td>5418 5418 5418 5448 7448 7448 7448 7448 7448 7448 744</td><td>0040</td><td>0044 01-1-0 08-00 08-00</td><td>ທີ່ທີ່ຫຼືອ ດັດຫຼືອ</td><td>655•6 61•86 61•30</td><td>N044 40014</td><td>2344 23244 232139</td><td># # 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td><td>1</td></t<>	U		0044 0044	6004 6004 6004 6004 6004 6004 6004 6004	សហេត្ត	5418 5418 5418 5448 7448 7448 7448 7448 7448 7448 744	0040	0044 01-1-0 08-00 08-00	ທີ່ທີ່ຫຼືອ ດັດຫຼືອ	655•6 61•86 61•30	N044 40014	2344 23244 232139	# # 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1
SR 0.2884	S		00MM	13 29 29 29 29 29 29 29 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	မီမီမီမီ	40100 40100 0400	ມູ່ມູ່ມູ	0000 0000 0400	Macha Agene	00000 0000 4000	2000	10288 10288 10288 10288	8778 3078 3074	
SR 0.0338 6.665 SR 0.0115 0.0115 0.0115 SR 0.0115 0.0115 0.0115 0.0115 SR 0.0115 0.0115 0.0115 0.0115 0.0115 SR 0.0015 0.0115 0.0115 0.0115 0.0115 0.0115 SR 0.057 4.117 0.0115 0.057 4.117 0.055 0.015 SR 1.0043 11.043 1.0143 1.0143 1.0143 0.055 0.017 0.055 0.055 0.056 0.056 0.057 0.056 0.056 0.051 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 </td <td>3</td> <td>SC SR</td> <td>000 00 00 00 00 00</td> <td>0 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>00000</td> <td>4 - MO 9 4 - MO 9 4 - MO 9 4 - MO 9 4 - MO</td> <td></td> <td>80011 7408</td> <td>000m</td> <td>0000 0000 0000 0000</td> <td>0 M M M 0 M N 00</td> <td>4 M M Q 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>1514 3614 7534 7534</td> <td></td>	3	SC SR	000 00 00 00 00 00	0 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000	4 - MO 9 4 - MO 9 4 - MO 9 4 - MO 9 4 - MO		80011 7408	000m	0000 0000 0000 0000	0 M M M 0 M N 00	4 M M Q 0 0 0 0 0 0 0 0 0 0 0 0	1514 3614 7534 7534	
SR 0.057 4.17 99.5 4.15 97.8 3.96 96.1 3.79 3.91 ST 0.3401 255.01 4.15 91 255.0 446.03 27.7 3.95 96.1 3.79 3.89 ST 0.3401 255.01 4.15 91 255.01 445.03 255.0 446.03 3.79 3.89 3.95 74 3.79 3.89 3.95 74 3.79 3.89 3.95 74 3.79 3.89 3.95 74 3.79 3.89 3.75 557.05 3.79 3.89 3.95 74 3.79 3.95 74 3.72 3.75 3.95 74 3.73 3.75 557.05 4.155 3.75 3.35 9.6 9.75 3.35 9.74 3.137 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 3.75 <	Ŧ		M 11 000	000 000	0 0 0	000 000	a 0 0		N 00 00	\$00 ••••	53.0	100 41-9	421. 216. 224.	
SR 0.758 ST 0.758 ST 0.758 ST 0.758 ST 0.758 ST 0.758 ST 0.292 ST 0.292 ST 0.292 ST 0.292 ST 0.292 ST 0.263 ST 0.2664	S		• • • • • • • • • • • • • • • • • • •		ດ ພົ້ມຄື	4 0004 • 0004	N 0000	0 0400 0 4000 0 4000 0	ចំណូល ចំ	M 0400	3451 38 24551 38 34551 38	21309 13400 13400 13400 13400	268. 268. 11721.	
SR 0.474 7.11 SR 0.474 7.11 ST 0.474 7.13 ST 0.474 7.13 ST 0.474 7.13 ST 0.474 7.13 ST 0.162 11.46.55 ST 0.164.74 94.93 ST 0.164.74 94.93 ST 0.164.74 94.93 ST 0.164.74 94.93 SR 1.122.945 90.3 ST 0.6664 1.122.45 ST 0.230 339.75 ST 0.	3		200 200 200 200	13 7 10 6 22 29 6 29 6	~ ~ ~ ~	00000 0044 0044	N N - N	00000 00000 00000	ហំហំលំលំ	4400 0000 0000 0000 0000	200 200 200 200 200 200 200 200 200 200	111958 10858	000 000 00 00 00 00 00 00	
x SR 0.664 #11.72 97.5 #12.46 72.4 #21.90 25.0 #39.75 #112. #785. C 0.6664 #9.10 97.5 #9.84 72.4 #19.29 25.0 #37.14 #88. #646. ST 0.2555 #19.76 92.4 #19.29 25.0 #37.14 #88. #646. ST 0.2555 #19.76 92.4 #19.82 83.0 #23.38 #184. #96969. PT 0.230 #27.50 98.9 #19.43 85.6 #256. #9556. #9655.	3		4411 7780	22450	0 0 0 0	24 24 24 24 24 24 24 24 24 24 24 24 24 2	4444	-0000 -0000 	លំលំចំ 🗢	2000 0000 0000	04 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	400 60 60 60 60 60 60 60 60 60 60 60 60 6	1111 8888 8888 8444 8024 8024 8024 8024 8024	
	N / S		8000 5000	27911	N N 40	480V	งงงท	0.00	លលាក់ហ		1887 1887 1887	₩ 8400 8400	1 206. 1 033. 1 1236.	

	1	i											
	0F A 0 YEAR 200	16.		DF A O VEAR 200	830. 1084.	146. 267.	627. 777.	1511.	275.	1323.	1593 . 1795.	694• 830•	1361. 1525.
MPCX.	T VALUE Stream T 100	14.	•EOMM	T VALUE Stream T 100	712. 916.	132. 229.	510. 631.	1215.	221.	1095. 1246.	1306. 1469.	568. 677.	1106. 1245.
SERIES	PRESEN PROFIT 10	m	SERIES	PRESEN PROFIT 10	139. 174.	45°	91. 112.	212.	39 .	202. 228.	236 . 264.	102.	199. 223.
FOR SOIL	ELD) FOR 200	0•02	FOR SOIL	ELD) For 200	6•44 10•27	0•30 2•13	8•61 10•88	22.63	4.11	15•67 18•51	20•63 23•69	9.17 11.22	17.80 20.42
ANAGEMENT	ITTAL YI NAGEMENT YEAR	94.9	A GEMENT	ITTAL YI NAGEMENT YEAR	0 • 0 6 6	92•3 92•3	1.76	66° 3	99 • 1	91•6 91•6	93•6 93•6	95. 7 95. 7	94•3 94•3
AND M	F THE IN D AND MAI R 100	0.17	AND MANA	F THE IN AND MA	10•68 14•52	1•59 3•42	9•19 11•46	22.73	4.14	18•60 21•43	22•91 25•96	10•05 12•10	19•54 22•16
TO LAND	S A X S TO LAN	97.1	TO LAND	I TO LAND TO LAND YEAR	94 • 6 94 • 6 6	95.7 95.7	€ 886 866	99•5	99 . 4	950 950 950	96 . 4 96 . 4	97•5 97•5	96•8 96•8
RETURN	INING (A Y Return R 10	0 - 32	RETURN	INING (A Y Return R 10	14•75 18•58	2•93 4•76	9•76 12•03	22+83	4.16	21•58 24•41	25 •33 28•38	10•96 13•01	21•38 24•00
ER ACRE	LC REWA E YEARL YEA	99 . 2	ER ACRE	HE VEARLY	99 9 1991	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	2.065	99•6	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	<u>や</u> ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・	4 • 9 9 4 • 9 9 4 • 4	£•66 ۥ66
SS AND P	THE VIE AND TH YR 1	0 - 34	SS AND P	THE YIE AND TH YR 1	15•24 19•08	3 • 09 4• 92	9•82 12•09	22 84	4.17	21•93 24•76	25•61 28•66	11•06 13•11	21+58 24+20
VIELD LOSS	PERCENT TOPSOIL LOST/YR	0.042	VIELD LOS	PERCENT TOPSOIL LOST/YR	0.169 0.169	0.130 0.130	0• 039 0• 039	0+005	0.008	0.143 0.143	0.104 0.104	0• 065 0• 065	0• 091 0• 091
39 .	е С	SR	40.	a	ഷ്ഠ	αu	αu	SR	SR	αu	a SO	а С	ж S U
TABLE	ROT.	œ.	TABLE	ROT.	υ	S	3	Н/Ч	α	c/s	3 \ U	ŝ	C/S/#

• YIELD	Lo Lo	T UNA CSL									
PERC TOPS LOST	UIL VR	THE YIE AND TH YR 1	SLD REMA JE YEARL YEA	INING (AS Y RETURN R 10	TO LAN YEA	OF THE IN ND AND MA AR 100	NITIAL Y IANAGEMEN YEA	16LD) T For R 200	PRESE PROFIT 10	NT VALUE Stream 100	TO YEAR 200
•0	011	22•84	9 9 •6	22•82	99 . 3	22.60	98•9	22.37	211.	1212.	1506.
•	017	4.17	99 • 6	4.16	1•66	4.10	98 • 5	4.04	3 9	221.	274.
۰ ۲IE	IELD LO	JSS AND F	EF ACRE	RETURN T	O LAND	AND MANA	AGEMENT	FOR SOIL	SERIES	•10NW	
00W	RCENT PSOIL ST/YR	THE YIE AND TH YR 1	ELD REWA HE YEARL YEA	INING (AS Y RETURN R 10	TO X TO X TO X TO X	F THE IN AND AND 1000 A	ITIAL Y NAGEMEN YEA	IELD) T For R 200	PRESE PROFIT 10	NT VALUE Stream 100	0F A TC YEAR 200
00	. 220	33•51 37•34	5 ● 8 6 6	32 • 75 36•58	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	26•62 30•46	86 • 4 8 0	18•88 22•72	307. 342.	1633 . 1837.	1545. 2199.
00	• 169	10•66 12•43	59 •1	10•41 12•24	94•6 94•6	8.39 10.22	00 00 00 00	6.28 8.11	98. 115.	518. 615.	617. 738.
00	• 051	25.78 28.05	00 00 00 100	25+67 27+94	0 • 86 • 86	24•70 26•97	96•5 96•5	23 • 74	238 259	1351.	1667. 1818.
Ŭ	0.007	22+84	99 ° 6	22+83	99.4	22.70	99 • 2	22.556	212.	1214.	1509.
0	010	4.17	9 0 €	4.16	66 • 3	4 .1 3	0.00	4•09	30	221.	275.
00	• 186 • 186	37•40 40•23	0 • 6 6 • 6 6 6 6	36 85 39 69	949 949 00	32•38 35•21	88 88 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	27•43 30•26	344 370	1882. 2033.	2280 . 2468.
00	•135	45•66 48•71	99 99 99	45.22 48.27	95° 95° 95°	41•44 44•50	92 • 0 92 • 0	37•79 40•85	421. 449.	23 40 . 2503.	2862. 3065.
00	• 085 • 085	24•07 26•12	000 40 44	23 . 91 25 . 96	96 • 9 96 • 9	22 = 44 24 = 48	94•6 94•6	21•04 23•09	222.241.	1247.	1533. 1668.
00	•119	38 . 05 40 . 67	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	37•72 40•34	96 . 0 96. 0	34•87 37•49	92•9 92•9	32•16 34•78	351+ 375+	1958. 2097.	2399 . 2572.

TABLE 43. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MN13.

ROT.	ß	PERCENT TOPSOIL LOST/YR	THE VIE AND TH VR 1	E V R A A A A A A A A A A A A A A A A A A	INING (A Y RETURN R 10	TO LAN	R 100 M	NITIAL Y Anagemen Yea	TELD) Teor R 200	PRESEN PROFIT	T VALUE Stream 100	TC YEAR 200
U	с v v	0•464 0•464	15•14 18•98	98 1 98 1	13•85 17•69	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2•05 5•89	99 99 93 99 99 99 99 99 99 99 99 99 99 9	•40•81 •36•97	134. 170.	552. 756.	417. 671.
S	κυυ	0•357	3•06 4•89	999 989 44	2•64 4•47	4 • 68 4 • 68 4 • 68	10.79 1.04	67•6 67•6	100 100 100 100 100 100 100 100 100 100	0 4 0 0	82. 179.	39. 160.
3	αso	0.107	25•77 28•03	177 177 • • • • • • • • • • • • • • • • • • • • •	25•55 27•82	56e 50 56e 50	23•64 25•90	0 0 0 0 0 0 0 0	21.83 24.10	238 238	1327.	1625.
H/H	sR	0.014	22.84	9●65	22.81	99 . 2	22+55	98•7	22•26	211.	1211.	1503.
α	х S	0.021	4.17	9 8	4.16	98• 9	4•09	98•2	4.01	39 .	220.	273.
c/s	αu	0• 393 00 393	21•86 24•69	60 00 00 00 00 00	20•93 23•76	88 86 86 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	13•04 15•87	59 . 7 59.7	60° 60° 110°	198 . 224.	982 . 1133.	1067. 1254.
ヨンロ	К U	0.286 0.286	34• 34 37• 39	58•7 98•7	8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	91•6 91•6	27 • 01 30 • 06	79.4 79.4	15•77 18•83	00100 0000 0000	1669. 1832.	1974. 2177.
S/W	к о	0.179 0.179	19•84 21•83	0 • 6 6 • 6 6	19.52 21.57	00 44 44	16•90 18•95	89•4 4•68	14•09 16•13	182. 201.	992. 1101.	1199. 1335.
C/S/M	κυ	0• 250 0• 250	27 . 35 29, 96	0,0, 0,0, 0,0, 0,0, 0,0,	26•75 29•36	92•6 92•6	21•95 24•57	ເມີດ ອີສ ອີຍ	14•99 17•61	251. 275.	1338. 1477.	1593.

TABLE 44. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES MN35.

C 1.408 -3.37 95.4 -6.15 25.0 -57.84 25.0 -57.84 25.0 -57.84 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1743 -1143 -1743 -1143 -1743 -1143 -1743 -1143 -1743 -1143 -1743 -114	ROT.	d D	PERCENT TOPSOIL LOST/YR	THE YIEL AND THE YR 1	D REWA VEARL YEARL	TINING (AS	TO LAN YEAN	R THE IN AND MA 100 MA	ITIAL Y NAGEMEN YEA	116LD) 17 FOR 18 200	PRESEN PROFIT	NT VALUE Stream 100	TO YEAR 200
SR1.083-4.5796.3-5.4925.0-27.1525.0-27.15-47450780SR0.32597.798.511.5690.45.4073.5-2.72889427.464SR0.32512.0498.511.5690.45.4073.5-2.72889427.464SR0.04322.8399.521.5673.5-2.72889427.464SR0.04322.8399.521.9696.571.111198.1481SR0.0634.1699.44.1497.53.9495.73.7438.217.267SR1.19299.64.1697.53.9495.73.7438.217.267SR1.19296.07.0225.0139.9325.039.9374.242.SR0.86717.207.0225.019.1925.037.1074.242.6.73SR0.86717.207.0225.019.1925.037.1027.25793.374.SR0.86717.209.1225.010.9025.039.9374.242.6.73SR0.86717.209.1225.019.1925.039.9374.242.793SR0.86717.209.1225.025.025.025.0239.19197.2SR0.5428.1214.1625.0		к о	•• 44 00	₩¢ ₩¢	ព័ល		ធំព័	54•0		54•0	4 i 4 0	1243	1997
SR 0.325 9.77 98.5 9.29 90.4 5.40 73.5 -2.72 88. 427. 464 SR 0.325 12.04 98.5 11.56 90.4 7.66 73.5 -2.72 88. 427. 614 SR 0.043 22.83 99.5 22.75 98.2 21.99 96.5 211.09 1198. 1481 SR 0.065 4.16 99.4 4.14 97.5 3.94 95.7 3.74 38. 217. 267 SR 0.0657 14.16 99.4 4.14 97.5 3.94 95.7 3.74 38. 217. 26713 SR 0.0867 14.14 97.5 25.0 55.0 55.0 55.0 55.0 55.0 55.0 55.0 57.19 748. 5423. 5613 SR 0.8677 17.20 96.9 15.42 488.6 255.0 55.0 55.0 55.0 56.0 5423. 585.0 5613 1233. 285.0 57.19 285.0 537.19 2865.		a So	• 0 8 0 8 0 8	40 • • 0	é é	9 0 10 0 10 0	ហំហំ	27•1 25•3	ເດີຍ	25.4	4 M	40	08
SR 0.0043 22.833 99.5 22.75 98.2 21.98 96.5 211.0 1198.0 1481 SR 0.0055 4.16 99.4 4.14 97.5 3.94 95.7 3.74 38. 217.0 267 SR 10.055 4.16 99.4 4.14 97.5 3.94 95.7 3.74 38. 217.0 267 SR 11.192 66.23 966.0 7.02 255.0 139.93 748. 1393.3 1913 C 11.192 96.0 7.02 255.0 137.10 255.0 137.10 74.0 2842.0 197.3 SR 0.8667 14.14 96.0 15.42 488.6 122.37 285.0 123.9 285.0 197.2 197.2 SR 0.8667 177.20 96.09 81.2 11.15 255.0 123.4 151.4 151.4 151.2 285.0 197.2 SR 0.6667 177.20 96.09 81.2 11.15 255.0 123.4 255.0 255.0 239.19		a So	0.0 ™™	2.04	ພ ພ	9 1 0	00	40	mm	N 4 0	800	2 5	44
0.055 4.16 99.4 4.14 97.5 3.94 95.7 3.74 38. 217. 267 1.192 66.23 966.0 4.19 25.0 339.93 28. 217. 267 1.192 66.23 966.0 7.02 255.0 377.10 255.0 377.10 74. 38. 2133	H∕d	a s	•04	Ň	•	2.7	8	1 • 9	•	1•2	11	61	481
SR 1.192 6.23 96.0 4.19 25.0 37.10 25.0 37.10 74. 139.33 C 1.1192 96.0 7.02 255.0 37.10 74. 1242. 1725 SR 0.867 14.14 96.9 15.42 48.6 122.37 48.6 123.10 74. 123.42 197 C 0.867 17.20 96.9 15.42 48.6 126.37 48.6 123.3 286.9 197 C 0.867 17.20 96.9 15.42 48.6 123.6 25.0 36.14 123.2 286.9 197 C 0.867 17.20 96.98 15.42 48.6 123.5 25.0 36.14 151.0 74.8 197 SR 0.542 8.83 97.99 81.2 11.15 255.0 255.0 36.14 151.0 227.5 SR 0.542 8.83 97.2 9.95 25.0 255.0 327.5 227.5 257.7 255.0 327.5 227.5 257.0 257.0		a S	• 06	•	• 6	•	-	6	ົ້	~	C	17	Ŷ
SR 0.867 14.14 96.9 12.37 48.6 # 22.24 25.0 # 39.19 123. 285. # 197 C 0.867 17.20 96.9 15.42 48.6 # 19.19 25.0 # 36.14 151. 4 48. 6 SR 0.542 6.78 97.9 6.08 81.2 1 .15 25.0 # 36.14 151. 4 48. 6 6 6 7 6 6 8 8 6 8 6 8 8 6 8 6 8 8 6 8 8 6 8 8 8 6 8 8 8 6 8 8 8 6 8 8 6 8 8 6 8 8 6 8 8 8 6 8 8 6 8 8 6 8 8 6 8 8 6 8 8 6 6 6 8 8	ы	α ωυ	•19	NO	•• • •		ມູດ	39•9 37•1	ំ ហំ ហំ	39 • 9 37 • 1	04	10 A 0 10 A 0 10 A 0	122
SR 0.542 6.78 57.9 6.08 81.2 11.15 25.0 25.55 60. 218. 87 C 0.542 8.83 57.9 6.08 81.2 0.90 25.0 25.55 60. 218. 87 SR 0.542 8.83 57.9 8.12 81.2 0.90 25.0 25.0 23.50 79. 327. 222 SR 0.758 10.78 97.2 9.45 62.9 11.22 25.0 31.47 118. 400. 103 C 0.758 13.33 97.2 12.07 62.9 11.22 25.0 31.47 118. 400. 71	æ	αu	• 86 • 85	44		010 ₩4	ພື້ພື້	19.10	ហំហំ		533	00 47 10 00	197 197
SR 0.758 10.78 97.2 9.45 62.9 11.22 25.0 34.09 94. 260. 10.75 C 0.758 13.39 97.2 12.07 62.9 11.22 25.0 31.47 118. 400. 7	3	α αυ	• • • •	N 00		••	••	1 • 1 0 • 9	ហំលំ	00 90 00 00	00	218	0 0
	3	ຜູ້	• 75 • 75	N.M.	**	0.0/ 4.0	0 0 8 0	11•2 #8•6	ທີ່ທີ	0.4 0.4	94 18	000	10

TABLE 45. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES OT01.

THE INITIAL VIELD PRESENT VALUE OF A 100 YEAR 200 10 100 YEAR 200 =7.65 86.3 =12.81 -31. -265. -388. =3.82 86.3 =12.81 -31. -265. -388. =5.98 90.0 =7.39 -42. -272. -355. =4.15 96.5 11.38 120. 796. 980. 12.45 99.0 1.90 1.91 796. 980. 14.42 96.5 13.65 141. 796. 980. 14.42 99.0 1.90 1.84 272. -355. 14.42 99.0 1.90 1.84 265. 482. 3.910 99.0 1.90 1.84 265. 482. 3.913 98.9 -0.63 84.4 265. 482. 3.910 92.0 10.44 176. 794. 1151. 7.339 94.65 5.36 794. 713. 713. 7.3												
-7.65 86.3 -12.81 -31. -265. -1338 -5.98 90.0 -7.39 -42. -272. -1338 -5.98 90.0 -7.39 -42. -272. -1356 -5.15 96.5 11.338 120. 675. 980. -4.63 99.0 -7.39 -42. -272. -1356 -4.63 99.0 1.90 18.120 675. 980. -4.63 99.0 1.90 18.120 675. 980. -4.63 99.0 1.90 18.120 675. 980. -4.63 99.0 1.90 18.120 784. 974. -5.93 99.0 1.90 18.120 784. 974. -5.93 98.9 -2.63 84. 784. 974. -5.93 98.9 -176. 784. 794. 129. -5.93 98.9 176. 734. 734. 9825. -5.94 92.9 10.556 1354. 734. 9825. 5.955 949	ERCENT THE YIELD REMAINING (AS A OPSOIL AND THE YEARLY RETURN TO OST/YR YR 1 YEAR 10	HE YIELD REMAINING (AS A And the Yearly return to R 1 year 10	REMAINING (AS A Early return to Year 10	INING (AS A Y return to R 10	∢ 0 ⊥	X OF LAND YEAR	THE I AND M 100 M	ITIAL NAGEME YE	IELD T FO P 20	PRESE ROFIT 10	T VALU STREAM 100	0F A T0 YEA 200
-5.98 90.0 -7.39 -42. -272. -235. -4.15 96.65 11.36 1411. 796. 829 -4.63 99.0 1.451 137. 784. 974. -4.63 99.0 1.90 1.8 1.04. 129. -4.63 99.0 1.90 1.8 1.20. 675. 829 -4.63 99.0 1.90 1.8 1.37. 784. 974. 920. -3.910 88.9 -0.20 58.9 26.53 649. 269. 294. -3.910 88.9 -0.20 54.8 176. 920. 129. 294. -3.910 88.9 -0.20 54.8 176. 949. 129. -3.910 98.9 10.44.37 176. 949. 194. 194. -7.339 94.6 92.9 10.44.37 134.3 542. 553.3 -7.339 94.6 54.7 134.3 542. 734. 889.5 -7.339 94.72 134.3 592.4 111	0.220 m 3.06 98.9 m 3.57 93 0.220 0.77 98.5 0.27 93	3.06 98.9 =3.57 9 0.77 98.9 0.27 9	8•9 = 3•57 9 8•5 = 0•27 9	3•57 0•27 9		 mm + +	3	٠. د د	80	- E S	002 900 150	885 885
2-515 96.55 11.365 14.10 775. 98.0 4-653 99.0 1.90 18. 104. 775. 98.0 3-103 99.0 1.90 18. 104. 129. 974. 974. 3-103 99.0 1.90 18. 176. 958. 2653. 980. 3-103 98.9 -0.20 58. 2653. 984. 129. 974. 3-103 988.9 -0.20 13.54 176. 954. 129. 920. 3-104 92.0 13.554 176. 954. 129. 920. 94.0 920. 94.0 920. 94.0 920. 94.0 920. 94.0 94.0 920. 94.0 920. 94.0 920. 94.0 94.0 920. 94.0 920.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0 94.0<	0.169 =4.47 99.1 =4.64 94 0.169 =2.65 99.1 =2.81 94	4•47 99•1 =4•64 9 2•65 99•1 =2•81 9	9•1 *4•64 9 9•1 *2•81 9	2+64 2+64 2+81 2+91		ώœ	0.4 0.4		ិភ័ព ភូមិ ភូមិ	40	272	9.0 9.0 9.0
4.63 99.0 1.90 137. 784. 97.0 1.93 99.0 1.90 18. 1.04. 1.29 3.10 88.9 -0.20 58. 2.653 849. 2.99. 3.10 88.9 -0.20 58. 2.653 84. 2.694. 2.94. 3.00 92.0 10.448 176. 954. 2.694. 2.94. 3.00 92.0 10.448 176. 954. 2.694. 2.94. 3.00 92.0 10.448 176. 954. 2.694. 2.94. 3.00 92.0 10.448 176. 954. 2.94. 2.94. 9.446 92.0 10.443 111. 5.95. 3.73. 5.42. 9.446 92.9 10.56 1.35. 7.34. 7.34. 7.34. 7.34. 9.446 92.9 10.556 1.355. 7.34. 3.956. 3.956. 3.956. 9.446 92.9 10.556 1.34.3 7.34. 7.34. 7.351. 9.466.5 956.3<	0+051 13+01 99+5 12+93 98 0+051 15+28 99+5 15+20 98	3•01 99•5 12•93 98 5•28 99•5 15•20 98	9•5 12•93 98 9•5 15•20 98	2•93 98 5•20 98	ထထ	00	2. 4. 4.		- m • m • m	0 4 0 1	50	0.0
1.93 99.0 1.90 18. 104. 129 3.10 88.9 ~0.20 58. 2653 84. 269. 5.93 88.9 ~0.20 58. 2653 84. 269. 5.10 88.9 ~0.20 58. 2653 84. 269. 5.10 92.0 10.48 148. 791. 161. 7.339 94.66 8.40 93.6 794. 111. 7.339 94.66 8.40 93.6 794. 111. 92.9 7.94 111. 595.9 794. 734. 92.94 92.9 10.56 135. 734. 65.3 92.95 10.556 135. 734. 734. 734. 5.46 92.9 10.4.77 537. 2912. 734. 5.95 96.55 86.3 104.77 537. 2912. 373. 5.95 96.55 86.3 104.77 537. 2912. 361. 5.95 96.55 795.58 885.3 795.68	0.007 14.75 99.6 14.74 99.	4•75 99•6 14•74 99	9.6 14.74 99	4.74 99	0	4	4+6	•	4•5	ЧЧ Ч	84	74
3-10 88.9 *0.20 54.4 265. 265. 3.00 922.0 10.48 176. 791. 94.9 3.00 922.0 10.48 176. 791. 94.9 7.39 94.6 5.436 79. 433. 54.2 7.39 94.6 5.436 79. 433. 542. 9.446 92.9 7.94 111. 79. 94.9 9.466 5.436 7.94 111. 595. 713. 9.466 92.9 7.94 111. 595. 713. 9.466 92.9 10.556 135. 734. 65.9 9.676 56.3 94.72 135. 734. 87.3 5.95 90.0 40.477 533. 2912. 395.3 5.95 95.35 86.3 104.37 1343. 734.7 8955.3 5.95 96.55 85.35 84.8 734.7 2912. 395.4 5.95 95.95 84.8 734.7 5912.8 395.4	0•010 1•96 99•6 1•96 99•	• 96 99•6 1 •96 99	9.6 1.96 99	• 66 96	O,	m	6	•	•	Ð	40	29
3.09 92.0 10.48 176. 791. 7.39 94.6 6.36 36 79. 93. 7.39 94.6 6.36 36 79. 93. 9.46 94.6 6.36 36 79. 93. 9.46 92.9 10.56 111. 595. 713. 9.84 92.9 10.56 111. 595. 713. 9.84 92.9 10.56 111. 595. 713. 2.46 92.9 10.56 111. 595. 713. 2.46 92.9 10.56 111. 595. 713. 2.46 92.9 10.56 113. 595. 734. 2.47 598. 3104.37 1343. 7347. 88.7 5.95 99.0 47.42 537. 2912. 395.4 5.95 99.0 40.77 537. 2912. 395.4 5.95 99.0 40.77 537. 2912. 395.4 5.95 99.0 40.77 537. <td< td=""><td>0.186 6.45 99.0 6.08 94. 0.186 9.28 99.0 8.91 94.</td><td>•45 99•0 6•08 94 •28 99•0 8•91 94</td><td>9•0 6•08 94 9•0 8•91 94</td><td>• 08 94 • 91 94</td><td>44</td><td>2010</td><td></td><td>00</td><td>00 00</td><td>00.44</td><td>50</td><td>40</td></td<>	0.186 6.45 99.0 6.08 94. 0.186 9.28 99.0 8.91 94.	•45 99•0 6•08 94 •28 99•0 8•91 94	9•0 6•08 94 9•0 8•91 94	• 08 94 • 91 94	44	2010		00	00 00	00.44	50	40
7.39 94.6 6.36 79. 6433. 9.46 92.9 7.94.6 6.36 79. 6433. 9.46 92.9 7.94.4 111. 595. 713. 2.46 92.9 7.94.4 111. 595. 713. 2.46 92.9 10.56 135. 734. 6533. 2.46 92.9 10.56 135. 734. 6533. 2.46 92.9 10.56 135. 734. 6533. 5.47 554. 134.3 734.3 393.3 5.48 86.3 94.72 1255. 734.3 393.3 5.95.35 94.77 537. 2912. 393.3 9.30 90.0 40.77 537. 2912. 395.3 9.35 95.5 795.5 843.5 395.5 395.4 8.34 96.5 870.7 537.6 537.6 596.5 8.35 95.5 84.8 1327.6 7328.8 997.9 8.257 92.9 1327.6 7151.9 965	0.135 16.09 99.2 15.77 95. 0.135 19.14 99.2 18.82 95.	6•09 99•2 15•77 95• 9•14 99•2 19•82 95•	9+2 15+77 95+ 9+2 18+82 95+	5•77 95• 8•82 95•	មាំមា		0 iii 9 0	N N	0 M 4 U	46	- 0-0- 1-0-0-	949 151
9.84 92.9 7.94 111. 595. 7134. 2.46 92.9 10.56 135. 734. 8873 6.78 86.3 94.72 1254. 6833. 8855 6.42 86.3 104.37 1254. 6833. 8855 9.30 90.0 47.42 537. 2912. 3513. 9.30 90.0 47.42 537. 2912. 3513. 9.30 90.0 47.42 537. 2912. 3513. 9.35 90.0 47.42 537. 2912. 3513. 8.34 96.5 85.35 848. 795. 3513. 2.57 95.58 795. 848. 8955. 5954. 8.257 92.95 1327. 7328. 89254. 8.257 92.95 1327. 7358. 9464. 8.257 92.9 127.04 1327. 7539. 9464.	0.085 8.51 99.4 8.49 95. 0.085 10.55 99.4 10.54 95.	8.51 99.4 8.49 95. 0.55 99.4 10.54 95.	9•4 8•49 96• 9•4 10•54 96•	8.49 0.54 96.	00	ውወ	₩.4 ₩.4	ৰ ব	• •	0,00	- m Q	20 20 20
6.78 86.3 94.72 1254. 6833. 8255 9.40 73 104.37 1343. 7347. 88955 9.30 90.0 47.42 537. 2912. 3513. 9.30 90.0 47.42 537. 2912. 3513. 9.30 90.0 47.42 537. 5912. 3513. 2.955 96.5 79.58 795. 8895. 3513. 2.57 95.5 85.35 848. 4815. 5568. 8.35 85.35 848. 1327. 7328. 8924. 8.25 92.9 120.644 1403. 7752. 9464. 8.28 92.9 127.04 1327. 7539. 9464. 8.257 92.9 127.04 1276. 7151. 9264.	0.119 12.08 99.2 11.84 96.0 0.119 14.69 99.2 14.46 96.0	2.08 99.2 11.84 96. 4.69 99.2 14.46 96.	9.2 11.84 96. 9.2 14.46 96.	1.84 96. 4.46 96.	\$\$		2. 0.4		0• 5 0	35	0 ອຸ	10
6.78 86.3 94.72 1254. 6833. 8255 9.40 72 1343. 7347. 8895 9.30 90.0 40.77 537. 2912. 3513 9.30 90.0 47.42 537. 2912. 3513 9.30 90.0 47.42 537. 2912. 3513 9.30 90.0 47.42 537. 2912. 3513 9.30 90.0 47.42 537. 2912. 3513 2.95 96.5 85.35 848. 4815. 5951 8.25 85.35 848. 1327. 7328. 8924. 8.20 88.9 112.49 1327. 7762. 9464. 8.28 92.9 127.04 1344. 7762. 9263.	ROP ROTATIONS	ATION										
9-30 90.0 40.77 537. 2912. 3513 5:95 90.0 47.42 538. 3266. 3554 2:57 96.5 79.58 795. 4507. 5568 8:34 96.5 79.58 795. 4815. 5951. 8:34 96.5 85.35 848. 4815. 5951. 8:20 88.9 112.49 1327. 7328. 8924. 8:20 88.9 120.664 1403. 7762. 9464. 8:28 92.9 127.04 1276. 7151. 8779. 8:28 92.9 127.04 1276. 7151. 8779.	0.220 136.40 98.9 134.23 93. 0.220 146.04 98.9 143.88 93.	36.40 98.5 134.23 93. 46.04 98.9 143.88 93.	8.5 134.23 93. 8.9 143.88 93.	34 * 23 4 3 • 88 9 3 •	mm		6• 7 6 • 4	• •	94 •40 •2	202 405 404	883 845	895 895
2.657 96.5 79.58 795. 4507. 5568 8.34 96.5 85.35 848. 4815. 5951 8.34 96.5 85.35 848. 4815. 5951 8.20 88.9 112.49 1327. 7328. 8924. 6.35 88.9 120.664 1403. 7762. 9464. 8.28 92.9 119.75 1276. 7151. 8779. 5.57 92.9 127.04 1344. 7539. 9263.	0.169 58.43 99.1 57.45 94.0 0.169 65.09 99.1 64.10 94.6	8•43 99•1 57•45 94• 5•09 99•1 64•10 94•	9+1 57+45 94+ 9+1 64+10 94+	7.45 94. 4.10 94.	44	4 N	ກດ • ຍ ດີຍ	00	0 • •	98 98	912 266	513 954
8.20 88.9 112.49 1327. 7328. 8924. 6.35 88.9 120.64 1403. 7762. 9464. 8.28 92.6 119.75 1276. 7151. 8779. 5.57 92.9 127.04 1344. 7539. 9263.	0+051 85+94 99+5 85+61 98+0 0+051 91+71 99+5 91+38 98+0	5.94 99.5 85.61 98. 1.71 99.5 91.38 98.	9.55 859.61 98. 9.55 91.38 98.	5•61 98• 1•38 98•	00	00 00	0 m 0 m		ភ័ម សូម សូម	0 0 0 0 0	507 815	568. 951.
8.28 92.9 119.75 1276. 7151. 8779 5.57 92.9 127.04 1344. 7539. 9263	0.186 144.15 99.0 142.41 94.1 0.186 152.30 95.0 150.56 94.2	44.15 99.0 142.41 94. 52.30 95.0 150.56 94.	9.0 142.41 94. 5.0 150.55 94.	42•41 94• 50•56 94•	44	200	0.00 0.00	00	20.04	327 403	328 762	924 464
	0•119 138.32 99.2 137.27 96. 0•119 145.60 99.2 144.56 96.	38.32 99.2 137.27 96. 45.60 99.2 144.56 96.	9•2 137•27 96•	37.27 96. 44.56 96.	00	0120	2.0 2.0	• • • •	27.0	276 344	151 539	779 263

TABLE 46. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES 0113.

1													1
•	ß	PERCENT TOPSOIL LOST/YR	THE VIEL AND THE YR 1	С 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	AINING (AS Ly Return Ar 10	TO LA YE	OF THE ND AND AR 100	INITIAL MANAGEME YE	VIELD) Nt For Ar 200	PRESE PROFIT	NT VALUE Stream 100	TO YEAR 200	
	s С	0•451 0•451	12+26 8425	98 98 1	*13*14 *9*30	88 85 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	-17.2	5 4 4 4 4 4 4 4 5 6 9 9 9 9 9 9 9 9 9 1 1 1 1 1 1 1 1 1 1	-48.61 -44.77	-118. -82.		-1205. -1205.	1
	ч S O	0•347	12.06 10. 23	0 0 0 0 0 0 0 0 0 0 0 0	=12.31 =13.48	89 . 7 89.7	=14.3 =12.4	0 69•6 69•6	=18.89 =17.06	•00 •00 •00		04	
	а С С	0.100 401.00	6 6 6 6 6	1011 1011 1010 1010	6•47 8•74	96 • 4 96 • 4	5.1 7.4	3 9 9 9 9 9 9 9 9 9 9 9 9	₩ 90 90 00	86 80 1	321 . 442.	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
Р/Н	SR	0•014	14.75	9 0	14+73	99 • 2	14.51	1 98.7	14.27	137.		69	
	SR	0• 021	1 • 96	9 * 55	1•96	98•9	1• 9(0 98•3	1.84	18.	103.	128.	
	αu	0•382 0•382	* 3 • 44 * 0 • 61	98 • 98 4 • 9	1 • 05	88 . 6 88 . 6		500 500 500 500 500	•22•91 •20•08	ំព ភ្លាយ កាដ ដ	=1 52.	#476. #298.	
	s ч	0•278 0•278	6• 90 9• 96	₽ 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	6 9 40 0 40	91•8 91•8	1•91 4•96	44 44	11 100 44 100	61. 90.	258. 421.	400 400 400	
	a so	0.174 0.174	0+86 2+91		0•66 2•70	94 • 94• 5	-1-04 1-01	89.7	•2•83 •0•78	7• 26•	113.	1 18.	
¥ \	х С	0 • 2 4 3 0 • 2 4 3	2• 98 5• 59	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2•58 5•20	92 . 7 92 . 7	10 20 20	888 84 0 0 0 0 0 0	■5 ■5 0 8 0 8 0 8 0 8	26 50 50	79. 219.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
RIGA	TED	CROP ROT	TATIONS										
	a S O	0•451 0•451	110•41 120•06	98 •1 98 •1	106.48 116.12	85•8 85•8	71•00 80•65	42°9 42°9	■ 52 • 54 ■42 • 89	1005. 1094.	5106. 5620.	5564. 6203.	
	α αυ	0.347 0.347	34 39 41 04	000 000 000	32•68 39•33	89.7 89.7	18.69 25.34	69 69 69	1 3.60 5 .94	311 . 372.	1498. 1853.	1613. 2054.	
	ч с о	0•104 0•104	52• 81 58• 58	₽₽ •5 55	52•26 58•03	96 . 4 96 . 4	47•42 53•19	00 100 100 100	42 48 66 66 66	487. 540.	2697. 3004.	3291. 3674.	
	s с	0• 382 0• 382	114.77 122.92	9 9 9 9 8 9 4 4	111•65 119•80	88 88 68 6	85•54 93•69	62 . 3 62 . 3	15•45 23•61	1049. 1124.	5506. 5940	100 100 100 100	76
C/S/#	a N N	0 • 2 4 3 0 • 2 4 3	113.45	0 0 0 0 0 0 0 0 0 0 0 0 0	104•31 111•60	92•7 92•7	89•49 96•77	888 44 0 0	68•68 75•97	975+ 1042+	5288. 5676.	6363 6845	

TABLE 47. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES PF01.

•

ROT.	с С	TOPSOIL LOST/YR	AND THE YR 1	2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	AR 10		D AND WA		NT FOR AR 200	PRESEN PROFIT	T VALUE Stream 100	TO YEAR 200
υ	α wu	0.134 0.134	=10. 35 = 6.52	999 99 99 99	-10.64 -5.80	95 95 95	-13-04 -9-20	92 . 1 92 . 1	15.35 11.52	197. 162.	-610. -406.	1 792
S	αu	0.103	∎2•31 10•43 848	₽ ₽ \$ 6 6 6 6 6	■2•42 ■0•59	96 • 6 • 4	999-11- 1-53	►•26 53•7	#4•24 #2•42	••• ៧ឆ ៧ 1 1	-146. -48.	+04 +04 +04 +04
3	αυ	0•031 0•031	80 90 90 90	99 99 99 99	8 6 8 8 6 9	98• 6 98• 6	6•16 8•43	97•6 97•6	5•72 7•99	61• 82•	944 464 •	422. 572.
Н/Ч	sR	0•004	22 - 84	2•66	22 83	99 • 5	22.76	99.4	22.67	212.	1215.	1511.
α	SR	0•006	0.94	99 ° 6	0• 94	99 . 4	0•92	5 6 6	06 •0	•6	50.	62.
c/s	х с	0.114 0.114	3•16 5•99	00 00 00	2•94 5•78	96 . 1 96 . 1	1•09 3•93	00 03 0 0 0 0 0 0 0 0 0 0 0 0	#0.65 2.18	ភាស លាល • •	123.	129 . 316.
) N	s с	0•083 0•083	8•08 11•13	00 00 44	7•90 10•96	0 • 1 6 9 7 • 0	6• 35 9• 40	944 944 944	4•88 7•93	74. 102.	393 566	468. 671.
s∕#	а С	0+052 0+052	0 0 0 0 0 0 0 0	00 00 00	6• 23 8• 27	6*16 97*9	5•56 7•61	96 • 4 96 • 4	4• 91 6•96	58. 77.	320. 429.	389. 525.
C/S/₩	s so	0.072	7•44 10•06	000 000 000	7• 31 9•93	E • 16	6•11 8•73	000 000 000	4•97 7•59	00 00 00	368 508 •	442 6150
IRRIG	ATED	CROP	ROTATIONS									
υ	s С	0.134 0.134	136•49 146•14	0 0 0 0 0 0 0 0 0 0 0	135.15 144.80	95° 6	123•77 133•42	92•1 92•1	112•76 122•41	1258. 1348.	6994. 7508.	8552. 9191.
S	αu	0•103 0•103	2.71	₽ ₽) ••• • • •	2•29 8•95	96 . 4 96 . 4	-1 •41 5•24	93.7 93.7	-4.91 1.75	0 0 0 0 0	55. 410.	19. 460.
3	လူပ	0• 031 0• 031	19•75 25•52	99 99 99 99 99 99	19•62 25•39	98• 6 98• 6	18•35 24•12	97•6 97•6	17 •04 22•81	182 . 236.	1023.	1255. 1638.
C/S	а Ко	0•114 0•114	113•18 121•33	で)で) ● ● のの のの	112.22	96 • 1 1 96 • 1 1	103•90 112•05	93• 80 80 80	96•04 104•19	1044. 1119.	5829 6263	7142. 7683.
C/S/W	αu	0.072	93,37	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	92.83	5. 50 50	87.97	ອ ອີ ເອີ	83, 33	862.	4859.	5982.

TABLE 48. YIELD LOSS AND FER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES PF13.

ROT.	e G	PERCENT TOPSOIL LOST/YR	THE VIELD AND THE VR 1	Y EARL Y EARL	INING (AS Y RETURN R 10	HA K K R A N O N A N O N A N O N A N O N A N O N N O N N O N N O N N O N N O N N O N N O N N O N N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N N O N O N N O N O N O N O N O N O N O N O N O N O N O N N O N N O N N N O N O N O N O N O N N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N N O N O N O N O N O N O N O N N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N O N N O N O N O N N O N O N N O N O N O N N O N N O N N O N N N N N N N N N O N N N O N N N O N N N N O N N N N N N N N N N N N N N N N N N N N	IF THE IN ND AND MAIN	IITIAL Y NAGEMEN YEA	TELC) TT FOR R 200	PRESEN PROFIT 10	NT VALUE Stream 100	TO YEAR 200	
υ	ж о	0•376 0•376	-17.72 -13.89	9.9 9.8 4.4	=18.40 =14.56	88 88 88 88 88 88 88 88 88 88 88 88 88	-24 -24 -20 -20	63•7 63•7	■38•78 ■34•94	*167. *132.	-1076. -872.	#1447 #1193	i
S	α α	0•289 0•289	*6 38	₽ 98 • •	∎ 45•64 418	91•5 91•5	1 8 9 8 6 8 6 8 6 8 6	78•9 78•9	-12.27 -10.44	•09 •09 •1	•290 •293	#519 . #397.	
3	a R	0 • 087 0 • 0 87	6•62 8•89	99 • • 99 • • • •	6.50 8.77	96• 9 96• 9	5• 39 7• 66	94 94 94	4. 34 6.61	61 . 82.	326. 447.	391 . 542.	
H/d	SR	0.012	22.94	5 9 ∙ €	22.82	£ *66	22.60	98 • 9	22+37	211.	1212.	1505.	
α	SR	0.017	0• 94	9 0	0+93	99 • 1	0•89	98 • 5	0.85	6	49.	60.	
C/S	ຮັບ	0•318 0•318	■3 65 ■0 82	98 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	• 4•16 • 1•33	₩ 06	#8•28 #5•45	74•7 74•7	#16.59 #13.76	136 100	=294. =144.	1 2436 1248	
N U	<mark>ж</mark> о	0• 231 0• 231	6 8 8 9 9 9 9 9 9	989 989 989	3• 09 6• 15	93 . 1 93	*0 •45 2•61	88 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	-5-15	•00 •0	100. 263.	73. 276.	
s/w	မ္လင္	0.145 0.145	4 0 4 6 • 0 3	99•2 99•2	₽ 8 8 9 9 9 9	™ M © G 0 O 0 O	2•27 4•32	91•5 91•5	0= 73 2= 78	909 209	176. 285.	198. 334.	
C/S/W	αu	0• 202 0• 202	2•76 5•38	0 • 5 5 0 • 5 5	ភក • 4 ស 0 ភ	6 9 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	•0. 26 2.36	87+7 87+7	08 0 0 8 0 1 1	284 •88	80. 220.	62 . 236.	
IRRIG	ATED	CROP RO1	OTATIONS										
υ	a S O	0•376 0•376	81•09 90•73	989 44	78.11 87.75	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	53•30 62•95	63 • 7 63 • 7	#11.58 #1.93	737 . 827	3739. 4253.	4180. 4820.	
S	х С	0•289 0•289	*13•44 *6•78	98•7 98•7	*14 •44 *7 •79	91• 91• 91•	■22•49 ■15•84	78.9	#36.59 #29.94	1 29 .	1914 1914	#1266 #825	
3	к С	0•087 0•087	a ∎ 9 95 95	4 • 66 4 • 66	2 • 86 9 • 63 9 • 63	96.9 96.9	-0-0M 5-74	94 94 ຍິຍ	#2+ 48 3+ 02	28. 81.	101.408.	86. 469.	7
c/s	s S S S S	0•318 0•318	70.05	98 98 98	67+88 76+03	7.06	50•32 58•47	74.77	14.94 23.94	639 . 714.	3306. 3741.	3818. 4359.	8
C/S/W	SS	0•202 0•202	57•60 64•88	0 • • • • • • • • • •	55⊕ 36 63⊕ 64	93 • 8 93 • 8 93	46•29 53•57	88 7 7 7	34•47 41•76	508 608 •	2819. 3207.	3367. 3850.	

•	VIELD	C LOS	S AND PER	ACRE	RETURN T	0 LAND	AND MANA	GEMENT	FOR SOIL	SERIES	PM01.	
8	PERCE TOPSO	NT VRL	THE VIELD AND THE YR 1	Y REMA Y EARL	INING (AS Y RETURN R 10	TO LAND VEAR	THE INI AND MAN 100	TIAL Y AGEMEN YEA	IELD) 7 FGR 7 200	FRESEN PROFIT 10	IT VALUE Stream 100	DF A TO YEAR 200
ທິບ	R 0 0 4 1 0 4 1 4		■6 7 0 ■2 86	99 • 99 • 20	61°E	95• 2 95• 2	-9.76 -5.92	91•19 4•16	=12•46 =8•62	∎ 1564 •	■424 ■220	#565 #310
ທິບ	R 0.11	mm	19. 07	00 00 00 00	■9.17 ■7.34	96e 1 96e 1		93 • 2	*10.73 *8.90	∎∎ 60.00 4.00	1503. 1406.	=637. =516.
ຜິບ	R 0 0 0 0 0 3 3	44	6.63 8.90	រោម • • • •	8 • 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	98 • 5 98 • 5	6.12 8.38	97.4 97.4	5+64 7+91	61. 82.	343 463	420. 570.
SR	R 0•00	5	14.75	7 •99	14.75	99 . 5	14.67	ۥ66	14.59	137.	784.	975.
ъ	R 0•00	2	1.67	99 • 6	1.67	99•4	1.65	99 . 2	1.63	15.	€6ª	110.
as o	R 0.12 0.12	44	1•64 4•47	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1•41 4•25	95• 8 95• 8	•0 •53 2•30	92•6 92•6	1 00 04 00 00	14. 40.	40. 191.	24. 212.
မီပ	R 0.09 099	00	10•33 13•38	00 00 00 00	10•13 13•18	96•8 96•8	8•39 11•45	94 • 4 94 • 4	6.75 9.81	95. 123.	509. 671.	609. 812.
က်ပ	R 0 • 05 0 • 05	999	04 •00 •00 •00	0 0 0 0 0 0	04 • 01 01	97•8 97•8	1•80 3•85	96 •1 96 •1	1•16 3•21	0 4 • •	119. 228.	140. 275.
ທີບ	R 0.07 0.07	00	6•47 9•09	000 •00 44	6• 33 94 94	97.1 97.1	5•05 7•67	94 • 9 • 4 • 9	6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	59 84 •	314. 454.	374 • 547 •
5	RRIGATED CROP	ROTA	ATIONS									
αυυ	R 0 • 1 • 0 4 1 • 0		99•69 09•34	00° 00° 00°	98.40 108.05	95• 2 95• 2	87•56 97•20	91•4 91•4	76•84 86•49	918. 1007.	5045. 5559.	6133. 6773.
άç	R 0.11	mm	34•52 41•18	₩) ● ● 0:01 0:01	33•95 40•60	96e 1 96e 1	28•95 35•60	93+2 94+2 94+2	24• 22 30• 87	317. 379.	1718. 2073.	2071.
ທີ່ບ	R0.00	44	36. 30 42. 07	000 000 000	36 •14 41•91	98 98 5	34•58 40•35	97•4 97•4	32 . 99 38 . 76	999 999 9	1898. 2205.	2340. 2723.
αu	R 0.12	44	08.22 16.37	66 99•2	107.19 115.34	95 95 8 8 1	98 . 38 06 . 53	92•6 92•6	89 . 97 98 . 12	998. 1073.	5551. 5985.	6790. 7331.
ัดบ	R 0.07 0.07	1	95•55 02•85	99.4 4 4	94•57 102•26	97•1 97•1	89 • 66 96 • 94	94 • 94 • 94 •	84•61 91•90	882. 950.	4965. 5353.	6107. 6590.

TABLE 49. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES PMOI.

TABLE 50. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES PMI3.

	d U		YR 1 HE	YEARL YEA	Y RETURN R 10	TO LAN	D AND AND AND AND AND AND AND AND AND AND		AR 200		NI VALUE Stream 100	T0 YEAR 200
υ	В В С В С	0•284 0•284	•10•39 •6•55	5 0 0 0 0 0 0 0 0	-10.98 -7.14	91•6 91•6	•15.64 •11.81	79•5 79•5	=23.64 =19.80	• 6 6 9 8 8 8	■668 ■464 ■	•9 06 •652
S	ຜິບ	0.219 0.219	#11.11 #9.28	00 00 00 00	=11.27 =9.45	000 000 44	1 2.59 10.76	86 • 4 4 • 58	14.24	-104. -87.	∎625. ∎527.	7 96 .
3	ဇူဂ	0• 066 0• 066	0•25 2•51	000 000 44	0•16 2•43	97•5 97•5	•0•58 1•69	95•6 95•6	•1 •29 0•98	N M N	116.	1 35.
H/d	SR	600 *0	14.75	99 ° 6	14.74	99 . 4	14.60	99 • 1	14.44	137.	783.	972.
α	SR	0.013	1.67	9 ° 6	1.67	99 . 2	1.63	98 • 8	1.60	15.	68.	109.
c/s	α α υ	0•241 0•241	•1•76 1•07	999 999 999	=2.17 0.66	92•8 92•8	■5.42 ■2.59	84 • 48 4 • 48	-9°93	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	175	=265. =77.
C / K	κυ	0.175	4•54 4•54	56 . 1.66	4•19 7•25	94 e S 8 e 4 e 5 e 5	1 • 38 4 • 4 38	89•7 89•7	1 • • 1 • • 4 • • 1	404 •03	172. 335.	175. 378.
S/W	κņ	0•109 0•109	1000 100 100 100 100 100 100 100 100 10	m ● 6 6 6 6	•2•24 •0•20	96•2 96•2	. 3.29	93.4 93.4	11 12 12 13 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14	•20• •1•	=1 38 . = 29 .	1 86 .
C/S/W	κυ	0+153 0+153	1• 81 4•42	99 + 1 99 + 1	1•56 4•18	95 • 1 95 • 1	#0•52 2•10	0•16 0•16	-2.60 0.01	40.	1 85.	28. 202.
IRRIGA	ATED	CROP R	OTATIONS									
U	α α	0•284 0•284	7-63	98•7 58•7	6.00 15.64	91•6 91•6	=7.05 2.60	79•5 79•5	=29,33 =19,73	63. 153.	86. 599.	100. 539.
s	s S	0.219 0.219	18•56 25•22	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17•57 24•23	93.4 4 4	9•60 16•25	86 • 4 • 4	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	167. 229.	791. 1145.	870. 1311.
3	s S C	0• 066 0• 066	19+74 25+51	4 • 0 0 4 • 0 0	19•46 25•23	97•5 97•5	16•89 22•66	95.6 95.6 6	14•42 20•19	290 290 290	991. 1298.	1198. 1581.
c/s	с К С	0• 241 0• 241	42•61 50•76	0 0 0 0 0 0 0 0 0 0 0 0 0	41•15 49•30	92• 8 92• 8	29•45 37•60	84 44 44 44	13•23 21•38	4 6 4 8 4 8	1980 . 2414.	2292 . 2832.
C/S/W	а С	0.153 0.153	44.15 51.44	99 •1	43•27 50•56	95 . 1 95 . 1	35•90 43•19	91•0	28•52 35•80 35	405. 472.	2171.	2602. 3085.

()
ŝ
PTSS.
ທ ພ
SERIES
Ľ
SOIL
α
ROR
F
GEMENT
Σ
Ш.
ž
Z
¥
Q
AND
<u>0</u>
AND
Ĺ
10
z
ď
Ĕ
RETU
ц
ACRE
и Ш
ŭ
9
Z
ທ
055
Ξ
0
7
*
۱D
μ
Ē
ŢĂ
-

	İ
0F A TC YEAR 200	=1 95.
PRESENT VALUE OF Profit Stream to 10 100 200 2	=156.
PRESE PROFIT	*27.
IELD) T FOR R 200	94•9 =3•06
INITIAL YIELD) Management for Year 200	94•9
THE AND 100	- 2•98
TING (AS A % OF Return to Land 10	0 • 16
INING (A) Y Return R 10	-2•90
LD REMAINI E Yearly R Year 1	99 • 2
THE VIELD AND THE V VR 1	= 2 . 89
PERCENT TOPSOIL LOST/YR	0•042
СР	SR
ROT.	œ

TABLE 52. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES PUOI.

	•											
ROT.	e U	PERCENT TOPSOIL LOST/YR	THE VIE AND TH VR 1	LD RENA E vearl	VINING (AS Y Return Ir 10	TO LAND	THE INI AND MAN	ITIAL Y JAGEMEN YEA	IELD) T FOR R 200	PRESEN PROFIT 10	T VALUE Stream 100	DF A TO YEAR 200
υ	ဇ္မဂ	0.268 0.268	■3•08 0•76	98 • 7 98 • 7	*3•69 0•15	92•1 92•1	*8 •59 *4 •75	000 •• 0101	#16+36 #12+52	∎ 10 10	=285. =81.	■430 ■176
S	а С	0.206 0.206	44 44 65 65 7	0 0 0 0 0	∎4•68 ∎2•85	93 • 7 93 • 7	*6 •27 *4•44	87•4 87•4	18 18 16 18 18	11 12 12 13 13 14 14 15 15 14 14 14 14 14 14 14 14 14 14 14 14 14	•278. •181.	1369 1248
3	န္မင္ရ	0• 062 0• 062	9.82 12.09	4€66 4€66	9•72 11•99	97•6 97•6	8•84 11•11	95 • 8 95 • 8 95 • 8	7.99 10.26	91. 112.	502. 623.	613. 764.
H/d	SR	0+008	14.75	99 • 6	14.74	99 . 4	14.61	99.1	14.46	137.	783.	973 .
α	SR	0.012	0• 94	9 0	0•93	99 . 2	06 0	98 • 8	0.87	6	₽ 9 •	61.
C/S	ဇ္ဂဂ	0.227 0.227	6 • 4 • 2 • 2	0 8 8 5 8 5	5•00 800 800	20 90 90 90 90	2.44 5.27	85•7 85•7	0. 50 0. 54	0 8 4 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	255. 406.	265• 453•
N V V	မ္လာဂ	0.165 0.165	14 - 32 17 - 37	1•66 1•65	13•95 17•00	94•8 94•8	10•84 13•89	₽₽ •06 66	7•63 10•68	131. 159.	686 849 •	812. 1014.
S/W	s Ч	0+103 0+103	6 85 8 90	ლ ლ • • თ თ თ თ	6.70 8.75	96 4 4 9 0 4 4	5+45 7+50	► • • • • • • • • • • • • • • • • • • •	4. 27 6. 32	8 8 9 9 9	335. 444.	400. 535.
C/S/W	αu	0.145 0.145	10.91 13.53	999 • 99 • 9	10•63 13•25	000 000 000	8• 30 10• 92	91•5 91•5	6•01 8•62	124.	524. 664.	621. 794.
DIAAIG	ATED	CROP RO	TATIONS									
υ	ко	0.268 0.268	136•34 145•99	98•7 98•7	133•72 143•37	92•1 1 92•1 1	112•76 122•41	000 00 00 00 00 00 00 00 00 00 00 00 00	79.56 89.21	1251.	6746. 7260.	8074. 8714.
S	к о	0•206 0•206	74•48 81•14	0 0 0 0 0 0 0 0 0 0 0 0 0	73•18 79•84	93•7 93•7	62•65 69•31	87•4 4•78	50.08 56.74	684. 746.	3707. 4061.	4465. 4906.
3	κυ	0• 062 0• 062	85•93 91•70	99 99 4	85•53 91•30	97•6 97•6	61•88 87•66	95° 8 95° 8 8	78•35 84•12	794. 848.	4492. 4800.	5541. 5924.
C/S	မ္လာပ	0.227	153.05 161.21	00 00 00 00	150•88 159•03	93• 2 93• 2 1	133•44 141•59	85.7 85.7	110•70 118•85	1408. 1483.	7721. 8155.	9358 9898 •
CISIW	ຜູ້	0+145 0+145	144.32 151.60	999 999 999	143.03 150.31	95 0 95 0 95	132•13 139•41	01• 01• 01•	121•40 128•68	1331. 1398.	7422. 7810.	9609 9573

TABLE 53. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES PUI3.

PROFIT STREAM TO YEAR
₽ 0
3 *203, *1359, 9 *168, *1155,
=113. =709 =96. =612
1. 22.
4•09
P (
9 44 mm o 1 11 11
888 999 9 44 199 9 6
18.61 12.40 10.58 2.33 14.72
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
<u>ም ውው ውው ው</u>
11 11 10 10 10 10 10 10 10 10 10 10 10 1
00 00 00 144 882 66 144 882 66 144 882 66
1 A A A A A A A A A A A A A A A A A A A

TABLE 54. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES RLCY.

C 0.0779 33.37 299.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.3 37.22 999.4 111.013 97.9 31.65 97.45 111.908 97.82 10.656 97.22 111.928 966.7 34.17 37.22 999.4 112.908 98.72 12.636 97.45 111.928 96.72 210.656 97.42 111.928 96.72 27.65 99.41 27.65 99.41 27.65 99.41 27.65 99.41 27.65 99.41 27.65 99.41 27.65 96.77 30.31 27.45 96.7 27.65 99.41 27.65 99.41 30.41 96.7 27.65 99.41 30.45 96.41 30.43 96.41 30.43 96.41 30.43 96.41 97.45 11.6 96.7 30.43 96.41 30.43 97.45 97.45	R0T.	ß	PERCENT TOPSOIL LOST/YR	THE YIE AND TH YR 1	LD REMA E YEARL YEA	INING (A Y RETURN R 10	TO LAN	F THE IN R 100 MA	VITIAL Y ANAGEMEN YEA	IELD) T FOR R 200	PRESEN PROFIT 10	NT VALUE STREAM	TC YEAR 200
SR 0.0660 11.113 99.4 11.08 98.2 10.56 97.2 11.92 SR 0.016 12.96 99.4 12.90 98.2 12.95 97.2 11.92 SR 0.0118 25.65 99.1 25.45 99.1 25.45 98.7 25.11 SR 0.0118 27.95 99.9 1 25.45 99.1 25.45 99.7 25.11 99.7 27.11 99.7 27.11 99.7 27.11 99.7 27.11 99.7 27.11 99.7 27.11 99.7 27.11 27.45 99.1 25.45 99.7 27.11 99.7 27.11 99.7 27.11 99.7 27.11 99.7 27.11 99.1 26.11 27.5 11.7 99.1 25.44 99.1 26.11 27.2 27.11 99.1 27.1 99.1 27.1 99.1 27.1 99.1 27.1 99.1 27.1 99.1 27.1 97.0 37.1 97.0 37.1 97.0 37.1 97.0 36.1 47.5 57.1 97.0 <th>U</th> <th>s Сv</th> <th>+ 07 + 07</th> <th>юм ••</th> <th>00</th> <th>00 • • •</th> <th>• • • •</th> <th>5 -</th> <th>÷.</th> <th>04 0.1</th> <th>805 844 84</th> <th>1741. 1945.</th> <th>2146. 2401.</th>	U	s Сv	+ 07 + 07	юм ••	00	00 • • •	• • • •	5 -	÷.	04 0.1	805 844 84	1741. 1945.	2146. 2401.
SR 0.0018 25.65 99.1 25.42 98.7 25.42 SR 0.0018 27.95 99.41 27.695 99.1 27.695 99.7 27.642 SR 0.002 32.83 99.45 52.65 99.1 27.695 99.7 27.642 SR 0.002 32.83 99.4 3.71 99.4 32.769 98.7 27.644 SR 0.0066 377.59 99.4 3.71 99.4 32.70 99.4 32.745 SR 0.0066 377.59 99.64 3.71 99.64 32.70 99.4 32.70 SR 0.0066 377.59 99.64 3.71 99.63 32.615 97.00 SR 0.0048 456.52 99.64 3.71 99.15 97.00 32.615 SR 0.0048 456.52 99.65 44.446 97.00 35.14 49.65 SR 0.0042 28.58 99.65 44.446 97.00 35.14 469 SR 0.0030 26.428 98.65 44.	S	as o	• 06 • 06	2+9	6 0	2 • 0 2 • 9	0 0 0	00 0	~~ ~~	0.00	103. 120.	581. 678.	716. 837.
SR 0.002 32.83 99.4 3.71 99.5 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71 99.4 3.71	3	αsυ	• 01	40 40	* *	1 0 0	00	40	ດິດ	5 • 4 • 4	238 259	1363. 1484.	1693 . 1843.
SR 0.0004 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 3.71 99.5 99.5 3.71 99.5 9.75 99.5 9.75 99.5 9.75 9.75	Н/Ч	a S	8	2 . 8	• 5	2.8	.	2 . 8	•	2.7	304.	1748.	2176.
SR 0.066 37.59 99.3 37.45 SR 0.0066 37.59 99.3 37.45 SR 0.0066 40.42 99.3 37.45 SR 0.0066 40.42 99.3 37.45 SR 0.0048 45.52 99.45 47.65 SR 0.0048 45.52 98.55 44.46 97.6 48.53 99.4 45.42 98.55 44.46 SR 0.030 24.28 99.45 48.57 98.55 47.552 97.66 43.563 SR 0.030 24.28 998.65 47.522 97.66 43.563 SR 0.030 24.28 98.85 47.552 97.66 45.653 SR 0.030 24.28 98.85 47.552 98.25.556 55.556 SR 0.042 38.13 99.65 98.65 25.5556 55.556 90.42 40.67 98.65 39.27 39.27 39.27	۲	S R	• 00	N	•		6	~ •	6	•	9 4 0	197.	246.
SR 0.048 45.52 99.4 45.42 98.5 44.46 97.6 43.58 C 0.030 24.28 99.4 45.42 98.5 47.52 97.6 43.58 SR 0.030 24.28 99.4 28.23 98.8 23.88 98.2 23.51 C 0.030 24.28 99.4 24.24 98.8 23.88 98.2 23.51 C 0.0330 26.33 99.4 26.29 98.8 23.88 98.2 23.51 SR 0.0330 26.33 99.4 26.29 98.8 25.92 98.2 25.55 SR 0.042 38.13 99.4 26.29 98.6 37.33 97.8 36.65 C 0.042 40.75 98.6 39.95 97.8 36.65 57.8 36.65	c/s	αu	• 06 • 06	₽ • • •	• • • •	7•4 0•2	0 00	6• 3 9• 1	•• ~~	n. •0	348 374	1975. 2126.	2443• 2631•
SR 0.030 24.28 99.4 24.24 98.8 23.88 98.2 23.51 C 0.030 26.33 99.4 26.29 98.8 25.92 98.2 25.55 SR 0.042 38.13 99.4 38.05 98.6 37.33 97.8 36.65 SR 0.042 38.13 99.4 40.67 98.6 37.33 97.8 36.65	3	ແດ	• • • •	ດ. ອີອີ	00	0 0 • • •	88	4.0	~~	00 00 00	421. 449.	2403. 2565.	2578 3180
0•042 38•13 99•4 38•05 98•6 37•33 97•8 36•65 0•042 40•75 99•4 40•67 98•6 39•95 97•8 39•27	S/W	s ч	00 •	4 9 0 10	• • • •	4 0 4 0	ຜື້ຜ	5. 80 90	00	លល់ ••• លំពី	225 244 8	1285. 1394.	1594 . 1730.
	S/W	а Ко	• • •	0 • 4 1	•••	80 9 9	00	10 NG	**	00 00 00	353• 377•	2015. 2154.	2498• 2671•

SERIES RESI .	
SOIL	
FOR R	
MANA GE MENT	
AND	
TO LAND	
10	
RETURN .	
ACRE	
u U U	
AND	
LOSS	
VIELD	
0 0 0	i
TABLE	

TABLE	E 55.	VIELD LOS	SS AND PE	R ACRE	RETURN T	O LAND	AND MAN	MANA GE MEN T	FOR SOIL	SERIES	RF SL.	
ROT.	6	PERCENT TOPSOIL LOST/YR	THE VIEL And the Yr 1	C REMA YEARL YEAL	INING (A Y RETURN R 10	S A X OF TO LAND YEAR	THE AND M 100 M	NITIAL Y ANAGEMEN YEA	IELD) T FOR R 200	FRESEN PROFIT 10	NT VALUE Stream 100	TO YEAR 200
U	с S	0+076 0+076	33•56 37•40	999 999 44	33•29 37•13	97•2 97•2	30 . 87 34 . 71	95.1 95.1	28•57 32•40	340 345	1731. 1935.	2121. 2375.
S	s С	0 • 058 0 • 058	5•81 7•64	000 000 000 000	5 + 7 3 7 - 5 6	7•79 7•72	5• 03 6• 85	96 • 0 96 • 0	4• 34 6•17	70 .	293 . 390 .	355. 476
*	к с	0•018 0•018	25•79 28•06	99 0 99 99	25•75 28•02	99 . 1 99 . 1	25•40 27•66	00 00 00 00	25 •0 2 27•29	239. 260.	1366. 1487.	1695. 1845.
ΗΛq	SR	0+002	32.95	2 ●56	32+95	99 • 6	32.89	99 • 5	32+84	305.	1754.	2183.
œ	SR	0+004	3• 7 3	2•66	3+73	99 • 5	3•71	99 . 4	3+70	35.	198.	247.
C/S	ж v	0• 064 0• 064	34 • 73 37 • 57	000 000 40	34•55 37•38	97.5 97.5	32•83 35•67	95•7 95•7	31•18 34•02	321 • 347 •	1810. 1961.	2230. 2417.
¥/U	а С С	0+047 0+047	45• 69 48• 75	00 00 00	40 40 40 40 40	98 • 1 98 • 1	44•08 47•14	96 • 7 96 • 7	42•64 45•69	423. 451.	2400. 2563.	2968. 3170.
M/S	а Кор	0•029 0•029	21•38 23•42	99 •9 •9 •9	21.32	98 • 7 98• 7	20 . 80 22.84	7•79 7•79	20,26 22,30	198. 217.	1127. 1236.	1395. 1531.
C/S/#	а а	0• 041 0• 041	36. 25 38. 87	00 • 0 0 0	36•14 38•76	5 8 8 8 8 6 6 6 6 6 6	35•07 37•69	0 • 1 6 0 • 1 6	34• 00 36• 62	350 . 360	1906. 2046.	2358 2532
TABLE	56	VIELD LOS	S AND PE	F ACRE	RETURN T	TO LAND	AND MAN	MANAGEMENT	FOR SOIL	SERIES	RHBL.	
ROT.	e G	PERCENT TOPSOIL LOST/YR	THE VIELO AND THE VR 1	C REWA VEARLY YEAR	INING (AS Y RETURN R 10	TO LAND YEAR	THE IN AND MA	ITIAL Y NAGEMEN YEA	IELC) T FOR R 200	PRESEN PROFIT	T VALUE Stream 100	0F A T0 YEAR 200
œ	SR	0.561	-1.15	96+3	-1-30	73.2	2.56	0 • 0	0•0	-11.	- 89 -	•1 33 •

TABLE 57. YIELD LOSS AND PEF ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES SYAL.

RDT.	e S	PERCENT TOPSOIL LOST/YR	THE YIEL AND THE YR 1	E VEARL	Y RETURN R RETURN R 10	TO LAND TO LAND YEAR	THE IN AND MA	ITIAL Y NAGEMEN YEA	T FOR 7 200	PRESEN PROFIT 10	T VALUE STREAM 100	DF A TO YEAR 200
U	αu	0 • 084 0 • 084	90 9 9 9 9 9 9 9 9 9 9 9 9 9	₽ ● • • • • •	5 ● 8 ● 6 8 ●	97•8 97•8	4• 61 8• 45	96 96 6	3•57 7•41	00 00	289. 493.	ອ ຊີ ເຊີຍ ເຊີຍ ເຊີຍ ເຊີຍ ເຊີຍ ເຊີຍ ເຊີຍ ເ
S	<u>а</u> со	0+065 0+065	3• 04 4• 86	89 ■ 6 6 6 6 6	2•98 4•81	98•2 98•2	2•53 4•36	97 • 1 97 • 1	2•13 3•96	0.4 0.0 •	151. 248.	182 303
Ņ,	К С К	0.019 0.019	25•68 27•95	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	25+65 27+92	99 . 1	25•40 27•67	98 •7 98 • 7	25•14 27•41	238. 259.	1362. 1483.	1692 1842
P/H	SR	0.003	6+60	£ 10 10 10 10 10 10 10 10 10 10 10 10 10	6 = 59	99 • 4	6.57	99 . 4	6 5 4	61.	351.	436.
œ	SR	0.004	6+35	G.∎ 6.6	5 . 35	99.4	6.34	£•66	6.32	59.	338 .	420+
c/s	a Ro	0.071	16.20 19.03	0,0, 0,0,0	16.09 18.93	0 • 8 6 • 8 6 6	15•16 17•99	96•9 96•9	14•35 17•18	150. 176.	840. 991.	1034 1222
M / U	a So	0+052 0+052	28•64 31•70	00 00 44	28 . 55 31.60	0.00 0.00 0.00 0.00	27•70 30•75	97•5 97•5	26•92 29•98	265 263	1506. 1668.	1863. 2065.
N/S	αu	0+ 032 0+ 032	19•77 21•82	900 •00 4	19•73 21•78	0 0 0 0 0 0 0 0 0 0	19.37 21.42	98•2 98•2	19•02 21•07	183. 202.	1045. 1154.	1296. 1431.
C/S/W	ဖို့ဂ	0 0 0 0 0 0 0 0 0 0 0 0 0 0	23+37 25+98	00 00 00 00 00	23 00 23 00 25	0.0 0.0	22•66 25•28	7•79 7•79	22•07 24•68	216. 240.	1230. 1369.	1522 * 1696•

TABLE 58. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES SCYL.

IABLE	0	VIELU LU	ON AND FEE		אבוסאא								ì
R0T.	<u>в</u>	PERCENT TOPSOIL LOST/YR	THE VIELD AND THE VR 1	C REWAII Yearly Year	NING (AS Return 1 10	TO LAND YEAR	THE INI AND MAN 100	TIAL Y AGEMEN	IELD) T For R 200	PRESENT PROFIT S 10	T VALUE C Stream TC 100	DF A D YEAR 200	i
υ	a tra	0.126 0.126 0.056 0.065	0000 0000 0000 0000 0000 0000 0000 0000 0000	00000 •••• 00000	5 9 9 9 1 1 1	97•1 97•1 98•1 98•2	4 7 8 9 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9999 909 44 90 1	200 200 200 200 200 200 200 200 200 200	00 4000 ••••	275 480 64	321 575 699	
S	a tr	0+097 0+097 0+051 0+051	W400 •••0 W900 W904	0000 •••• ••••	2 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	97 • 6 98 • 6 98 • 5	0045 004 004 004 004 004 004 004 004 004	00000 00000 00000	6 2 M N 9 0 0 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2420 2420	146. 243. 61.	13 294 78	
3	a tt	0.029 0.029 0.015 0.015	25.68 27.95 22.43 21.57	0.0.0.0 0.0.0.0 4.4.0.0 4.4.0.0	255 64 27 91 22 91 21 55	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	222 23 23 23 23 23 23 23 23 23 23 23 23	ოოდდ # ● ● ● დდდდდ იიიიი	24 89 27 16 22 92 24 77	2000 2000 2008	1359 1280 1338 1338	1687. 1837. 1541. 1662.	
HZd	S L C L C L C L C	0 •	14 67 12 64 10 58	លលល លលល ១០០០ លលល	14*66 12*04 10•57	0000 000 000 000	14•62 12•93 14•10	0000 0000 0000	14•58 12•98 14•16	136. 1120 980	781. 689. 752.	971 860 941	
c N S	a a hh	0.006 0.107 0.056 0.056	6.35 16.19 19.03 10.99	00000 00000 00000 00044 000444	6.35 116.03 118.87 11.90 10.83	99999 9874 4464 4464	6.33 14.73 17.56 12.20 12.20	99999 99999 99999 99999 99999 99999 9999	6.31 13.66 116.49 11.54	59• 176• 111•	338. 830. 981. 790.	420. 1016. 836. 980.	
3 V V	a tra	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 24 24 24 24 25 24 25 25 24 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25	0,0,0,0,0 0,0,0,0,0 0,0,4,4	2241 244 245 245 245 245 245 245 245 245 245	984 984 986 986 986 986 986 986 986 986 986 986	2400 24 2400 24 240 24 240 24	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	26, 26 29, 31 24, 20 26, 78	265 293 227	1496. 1659. 1348. 1481.	1846. 2049. 1671. 1841.	
3 1 0	a tra	0000 •••• 4400 0000 4400 0004	219 219 219 219 219 20 20 20 20 20 20 20 20 20 20 20 20 20	0000 0000 •••• 4444	19•71 21•76 16•24 14•47	0000 0000 0000 0000	19•19 21•23 17•03 18•43	0000 0000 0000 0000 0000	18•70 20•75 16•77 18•24	151 151 14	1041. 1150. 918. 992.	1288 1424 1141 1238	8
C/S/W	R SCR TSCR	0000 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 00088 000888 00088 00088 00088 000888 00088 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 00080 000888 000888 000888 0000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 000888 0008888 000888 000888 000888 000888 000888 000888 000888 000888 000888 0008888 0008888 0008888 0008888 0008888 0008888 00088888 0008888 0008888 00088888 0008888 00088888 00088888 00088888 00088888 00088888 00088888 000888888	203 100 100 100 100 100 100 100 100 100 1	00000 00000 0000 0000	233 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 • 235 •		228 224 224 220 220 220 220 220 220 220 220	97 97 98 98 1	21.55 24.17 29.54 21.63	216. 240. 180. 170.	1223. 1362. 1084. 1192.	1510 1583 1383 1483	/

TABLE 59. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES SFSL.

C 5 0.0778 5.99 99.4.5 97.9 4.770 96.7 7.55 55. 291. 347. S 0.0078 5.999 99.4.5 94.70 4.70 96.7 7.55 55. 591. 5491. 347. S C 0.0078 5.999 99.4 2.999 98.2 2.556 97.2 2.18 289. 1693. W SR 0.018 27.955 99.4 2.999 98.2 2.55.66 99.1 27.561 239. 1483. 1693. W SR 0.018 27.955 99.4 14.65 99.7 25.18 239. 1483. 1693. YH SR 0.018 27.955 99.4 14.65 99.7 25.18 239. 14633. 1693. YH SR 0.0018 27.955 99.4 14.654 99.7 25.18 239. 1483. 1843. YH SR 0.0066 19.033 99.4 14.654 99.7 57.44 97.6 781. 781. 2	ROT.	с С	PERCENT TOPSOIL LOST/YR	THE YIEL And The Yr 1	C REWA	VINING (AS Y SETURN PR 10	TO K Ken Yea	AND MA	ITIAL Y NAGEMEN YEA	15L0) T For R 200	PRESEN PROFIT 10	T VALUE Stream 100	DF A TO YEAR 200
Sr0.0603.0495.42.9998.22.55697.22.1828.152.1693Sr0.01825.66999.527.9298.725.18239.1363.1693Sr0.01825.65999.527.5599.127.6599.127.6518431693Sr0.001825.65999.527.9599.127.6599.127.6599.727.44239.1363.1693Sr0.001825.65999.527.9599.414.65799.414.6511363.1643Sr0.00146.3599.514.6799.414.65499.3144.61136.771.Sr0.006619.0399.316.1098.115.2397.1172.291336.421Sr0.006619.0399.315.6198.527.7797.627.03265.1036Sr0.004828.6499.419.0598.527.7797.627.03265.1667.2068Sr0.004828.6499.6530.8298.527.7797.627.03265.1657.2665Sr0.004828.6598.6523.08298.219.4598.219.072659.1665.2665Sr0.004821.67799.418.0698.527.7797.627.032653.1670.2068Sr0.004821.87799.4 <td< th=""><th>U</th><th>a So</th><th>01</th><th>ο.α • •</th><th>00</th><th>0,00 • •</th><th>~~</th><th>N9</th><th>00</th><th>N 10</th><th>50</th><th>61 6</th><th>44</th></td<>	U	a So	01	ο.α • •	00	0,00 • •	~~	N9	00	N 10	50	61 6	44
SR0.01825.6899.525.4699.125.4298.725.18233.1353.1693SR0.001827.9599.527.9299.127.6998.727.44259.1484.184.3SR0.00214.6799.514.6799.414.6499.314.61136.781.972SR0.006619.0399.316.1098.115.2397.1174.29159.338.421SR0.006619.0399.316.1098.115.2397.1177.29842.10.36SR0.006619.0399.315.2397.1177.2959.3338.421SR0.004828.6499.527.7797.627.03265.1507.2065SR0.03019.7799.419.4698.530.8299.21507.2065SR0.03021.8299.421.4598.621.4597.627.03265.1507.2065SR0.04223.3799.419.4698.621.4598.219.4797.820.07205.91495.61297SR0.04223.3799.419.4698.621.4598.219.4098.221.12202.1297205.8SR0.04223.3799.421.4598.622.7197.822.15202.1297.61297.61297.6SR0.042 <td>S</td> <td>αsυ</td> <td>06</td> <td>000</td> <td>• • • •</td> <td>0.00 ••</td> <td>ຜູ້ຜູ</td> <td>0 m • •</td> <td>~~</td> <td>••</td> <td>ໝໍທ່</td> <td>U) et</td> <td>80 10 4</td>	S	αsυ	06	000	• • • •	0.00 ••	ຜູ້ຜູ	0 m • •	~~	••	ໝໍທ່	U) et	80 10 4
SR 0.002 14.67 99.4 14.64 99.4 14.61 136. 781. 972 SR 0.004 6.35 99.4 14.64 99.3 5.33 59. 338. 421 SR 0.0066 166.20 99.3 16.10 98.1 15.23 97.1 14.46 150. 842. 1036 C 0.0066 19.03 99.3 18.06 98.1 18.06 97.1 17.29 1750. 842. 1036 C 0.0066 19.03 99.4 29.61 18.06 97.1 17.29 176.9 993.1 1224 C 0.0048 28.64 99.4 29.65 30.82 97.1 177.29 1776.9 993.4 1224 C 0.0048 21.70 98.5 27.07 97.6 27.03 295.6 16570. 2068 SR 0.0030 19.77 98.8 19.46 98.2 21.445 183.1 1076. 2068 16577. 2068 27.03 293.1 16779. 2068 206.5	3	ຜິດ	•••	40	• •	90 4 •	6 6	7• 6	.	0€ • 4 • 4	0.0	10 10 10 10 10 10 10 10 10 10 10 10 10 1	693 843
SR 0.004 6.35 99.4 6.35 99.4 6.35 99.3 16.10 98.1 18.06 338. 421 CR 0.0066 19.03 99.3 16.10 98.1 15.23 97.1 17.29 1842. 1036 CR 0.0066 19.03 99.3 16.10 98.1 18.06 97.1 17.29 176.9 993.1 1224 CR 0.0048 28.64 99.4 29.65 98.5 27.77 97.6 27.03 2655.1 1670. 2065 CR 0.0030 19.77 99.4 19.40 98.5 27.03 293.2 1670. 2065 SR 0.0330 19.77 99.45 19.40 98.2 21.45 98.2 21.12 202.1 1433 SR 0.0330 21.827 98.6 23.33 97.8 21.012 202.1 1433 SR 0.0042 23.337 98.6 25.33 97.8 21.012 22.02 1433 SR 0.0042 23.337 97.8	H	as	00	4•6	в	4.6	• 6	4 •6	6	4•6	9 E	81	72
SR 0.066 16.20 99.3 16.10 98.1 15.23 97.1 14.46 150. 842. 1036 C 0.066 19.03 99.3 18.05 97.1 17.29 176. 993. 1224 SR 0.048 28.65 98.5 27.77 97.6 27.03 265. 1507. 1865 C 0.0048 31.70 99.4 29.65 98.5 30.82 97.6 30.03 295.4 1507. 1865 C 0.0048 31.70 99.4 29.65 98.5 30.82 97.6 30.03 295.4 1507. 1865 1670. 2068 C 0.030 19.77 99.4 19.74 98.8 21.445 98.2 19.07 183. 1046. 1297 SR 0.030 21.922 98.8 21.445 98.2 21.12 202.8 1433 SR 0.042 23.37 98.6 25.33 97.8 21.12 202.8 1433 SR 0.0442 23.37 98.6	a	SR	00	m •	• 6	•	•6	М	• 6	₩ •	O.	38	21
SR 0.048 28.65 98.5 27.77 97.6 27.03 265. 1507. 1865 C 0.048 31.70 99.4 31.61 98.5 30.82 97.6 30.03 265. 1507. 1865 SR 0.048 31.70 99.4 19.74 98.5 30.82 97.6 30.03 253. 1670. 2068 SR 0.030 19.77 99.4 19.74 98.8 19.40 98.2 19.07 183. 1046. 1297 C 0.030 21.82 99.4 21.45 98.8 21.45 98.2 19.07 183. 1046. 1297 SR 0.042 23.37 95.4 28.6 22.71 97.8 22.15 216.12 1231. 1524 C 0.042 25.95 99.6 25.33 97.8 22.15 216.12 1231. 1524 C 0.042 25.95 99.6 25.33 97.8 240. 1370. 1524	S	αsυ	• 0 6 0 6	9 • 0 0	•• • •	6•1 9•9	ພໍພິ	5•2 8•0	** NN	4 • • •	90	4 G	224
SR 0.030 19.77 99.4 19.74 98.8 19.40 98.2 19.07 183. 1046. 1297 C 0.030 21.82 99.4 21.78 98.8 21.45 98.2 19.07 183. 1046. 1297 C 0.030 21.82 99.4 21.78 98.8 21.45 98.2 21.12 202. 1155. 1433 SR 0.042 23.37 95.4 23.30 98.6 22.71 97.8 22.15 216. 1231. 1524 C 0.042 23.37 95.42 28.6 25.33 97.8 240.77 230. 1524	×~	αsυ	• • • •	8.6	• •	3 ∎ • Q	00	7.7 0.8	~~	00 ••	60	507	865 068
SR 0.042 23.37 99.4 23.30 98.6 22.71 97.8 22.15 216 1231 1524 C 0.042 25.99 99.4 25.92 98.6 25.33 97.8 24.77 240. 1370 1698	B / I	ဇူဂ	mm 00	9•7 1•8	•• ••	× ×	ພື້	9 • • • • • • • • • • • • • • • • • • •	00	9.0	10 C	046 155	297 433
	C/S/W	а Ко	• • •	00 00 00	• • • •	19.0 19.0 19.0	00	2•7 5•3	N.N.	2.1	40	1531	524 698

TABLE 60. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES SMI3.

					A DUTNE	4 4						
ROT.	СP	TOPSOIL LOST/YR	- - -	н с 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LY RETURN	TO LAND	AND AND M		VIELD) NT FOR Ar 200	PRESE PROFIT 10	NT VALUE Stream 100	0F A TO YEAR 200
U	8 H		0 E 90 0 90 0 90 0 1 1	0000 0000 0000	100085 100085	92• 92• 44	1400 1400 1100 1100 1100 1100 1100 1100	67•5 67•5 91•6	126.65 122.81 14.34	• • • • • • • • • • • • • • • • • • •	=279. =74. =517.	# # # 53 # 1999
ა		N MMAA N MMAA	n 400 1 00 −0 1 00 −0	ດ້ ພື້ພິບັດ		0 4400	00400 • • • • • •	N mmma		0 1400	4 HOII	
3	a Service	0000 00000 00000 0004N	9 - 74 12 - 31 4 - 75 1 - 24	00000 00000 00000	9 9 11 9 10 10 10 10 10 10		BONN	VONN		0141	0 - 0 - 0 - 0 0 - 0 - 0	10014
H a	are a	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14•67 10•78 6•98 6.35	ດ,ດ,ດ,ດ ດ,ດ,ດ,ດ ອຸອຸອຸຊີ ເປັນບານ ຫ	14.65 10.77 6.57	വനന (•••• നെനന (10 N 0 C		- MNO (່ວດາດ	1 000 A	N01
C S S			ຳ ທ ກ ເດັ			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 4 9 6 7 5 4 9 6 7 8 3 7 8 3 7 8 3 7 8 3 7 8 3 7 8 4 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	0 00000 0 00000 0 00000 0 000	11 00004 00000 00000 00000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0008 0008 0008 0008 0008 0008 0008 000	4 10 10 10 10 10 10 10 10 10 10 10 10 10
¥ V	a solar	0.266 0.266 0.1466 1383	14 20 17 25 8 25 4 67	00000 00000 00000	13+82 15+82 15+82 15+82 15-82	MM00 9090 9000	11.21 14.21 8.16 9.88				0400 2014	4400
S / s	a stra	0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	10.97 13.02 1.280 1.24		10.81 12.86 5.71 1.15	8 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	1 9• 60 7• 48 7• 48	0000 4400 ••••	8.52 10.57 5.18 7.02	101. 53. 11.	80004 8008 801 801 801 801 801 801 801 801 80	673 809 476
C/S/#	S S S S S S S S S S S S S S S S S S S	0.232 0.232 0.125 0.121	13 66 86 66 66 60 60 61 11	0000 •••• 0000 0000	13 95 79 95 19 95 19 94	50000 0000 0000	11.28 13.89 8.38 9.71	9999 995 995 995 995 995 995 995 995 99	118 708 836 836 816 816	125 749 349	671. 814. 563.	807 980 601

ROT.	СD	PERCENT TOPSOIL LOST/YR	THE VIELC AND THE VR 1	REMAI Yearly Year	NING (AS RETURN 10	TO LAND YEAR	THE IN AND MA 100	ITIAL Y NAGEMEN YEA	TELD) TT FOR R 200	PRESEN	NT VALUE Stream 100	TO YEAR 200
U	တိုပ	0.271 0.271	=3.18 0.€55	5 5 8 5 5 5 5	-3-58 0-26	95 95 95 95	∎ 15 • 28 • 45	889 89 89 89 89 89 80 80 80 80 80 80 80 80 80 80 80 80 80	#10•70 #6•86	∎ 10 •4	∎242 1385	•742• €742
S	s С	0•208 0•208	₩ 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	00 •• • • • •	2 = 86 4 = 69	96 • 0 96 • 0	1•72 3•55	92 • 8 92 • 8	0•48 2•31	27• 44•	131. 228.	147. 269.
3	К С	0+063 0+063	9•74 12•01	00 00 4 4 4	9.68 11.95	98 98 28	9.12 11.39	97•2 97•2	8•63 10•89	90. 111.	506. 626.	622.
H/d	sR	0+008	14.67	59 € 5	14.66	ۥ66	14.57	99.1	14.48	136.	-577	969
œ	as	0.013	6.35	9 9 •66	6 + 34	99 • 2	6.31	98 • 9	6.27	59 .	337.	419.
c/s	a ano	0• 229 0• 229	10 30 30 80 80	00 •• 66 66	10+24 13+07	95 95 8 8 8	8•10 10•93	91•8 91•8	0 0 0 0 0 0 0	96. 123.	505 555	599 . 786.
× ∕ ⊃	ဖို့ပ	0.167 0.167	14•21 17•21	• 6 • 6 • 6 • 6	13•57 17•02	96• 6 96• 6	12•14 15•19	0,0 44 ••	10•51 13•56	131. 159.	710.872.	860. 1062.
¥/S	αu	0.104 0.104	10+98 13+03	0 0 0 0 0 0	10+88 12+93	97 • 5 97 • 5	10•03 12•08	96 • 0	9• 34 11•38	101.	564. 673.	691 . 827.
C/S/#	မ္လာဂ	0.146 0.146	13•65 16•26	00 00 00 00	13•46 16•07	96•9 96•9	12•00 14•62	949 949 949	10•77 13•39	126. 150.	690• 829•	840. 1013.
TABLE	62.	אוברט רטצ	S AND PE	F ACRE	FETURN T	0 LAND	AND MAN	MANAGEMENT	r FOR SUIL	SERIES	TVF S.	
ROT.	e C	PERCENT TOPSOIL LOST/YR	THE VIEL(AND THE VR 1	C GEMAII YEARLY	NING (AS Return 10	TO LAND YEAR	THE IN AND MA	IITIAL Y NAGEMEN YEA	/IELD) 17 FOR 18 200	PRESE PROFIT 10	NT VALU Stream 100	E DF A TO YEAR 200
۵	яs	0.076	0•92	™) ● 05 05	0+91	97.9	0.81	96 . 8	0.72	e C	47.	57.

YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES STOI. TARIF 61.

PERCENT TH TOPSOIL / LOST/YR YF	÷,2	THE YIEL AND THE YR 1	D F F F F F F F F F F F F F F	INING (AS Y RETURN A 10	TO LAND YEAR	THE IN AND MAI 100	INITIAL YI Management Year	IELD) T FOR R 200	PRESEN PROFIT	T VALUE Stream T 100	E OF A TO YEAR 200
0.145		0•92	9 € 9	0•86	92•3	0.38	87•1	-0.01	¢ Ø	37.	40.
VIELD LOSS	SS	an dina	ER ACRE	RETURN T	TO LAND A	AND MAN	MANAGEMENT	FOR SOIL	SERIES	VC13.	
PERCENT TH TOPSOIL A LOST/YR YR	±~;	THE YIEL AND THE YR 1	E V REMAIN	ING (A: RETURN	5 A X OF TO LAND YEAR	THE IN AND MAR 100	INITIAL YIE Management Year	ELD) For 200	PRESENT PROFIT	T VALUE Stream T 100	E OF A To YEAR 200
	Ĩ	-1.4 8	69 • 4	=1.52	98.4	"1 •87	97 . 3	* 2•24	-14.	• 67.•	-113.
0.028 0	c	• 92	£•66	9 • 91	97•8	0•80	96.3	0•68	8•	47.	56.
VIELD LOSS		AND PE	EP ACRE	RETURN T	TO LAND A	AND MAN	MANA GEMENT	FOR SOIL	SERIES	v315.	
DERCENT TH		THE VIELI AND THE YR 1	LC REVAIN F REVAIN YEAR	INING (AS Y RETURN T R 10	A LAC A A A A A A A A A A A A A A A A A	THE IN AND MAI	INITIAL YI Management Year	IELD) T For R 200	PRESENT PROFIT STR	VALUE REAM T 100	DF A 0 YEAR 200
0.219	Ũ	0•91	98 • 2	0•83	89•6	0.18	81.0	-0-47	8 •	32.	31.

TABLE 66. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES ZFOI.

	•00					טייג ש מיינ			- CC - CC -	20110	21 V 1 4		1
ROT.	СР	PERCENT TOPSOIL LOST/YR	THE YIE AND TH YR 1	LC REWA E YEARL YEA	AINING (AS V RETURN VR 10	TO X LAN YEAN	F THE INI AND MAN	TIAL Y IAGEMEN	IELD) T FOR R 200	PRESEN PROFIT 10	T VALUE Stream 100	DF A To Year 200	
υ	aso R	0.135 0.135	15+25 19•09	20 00 00 00 00	14•85 18•69	6 6 6 6 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	11.50 15.34	00 •00 •00	8•25 12•09	139. 175.	730. 935.	864. 1118.	Ì
S	αu	0•104 0•104	₩ 4 00 00	២ ២ ● 5 5 5 5	2 • 97 4 • 79	96 • 4 96 • 4	1•86 3•69	00 00 00 00	0 • 68 • 64	28 45 •	138. 235.	157. 278.	
ж	αu	0•031 0•031	19•40 21•67	999 999 999	19•34 21•61	98•6 98•6	18.79 21.05	97•6 97•6	18.21 20.48	179. 200.	1021.	1263 . 1413.	
H/d	as	0•004	32 95	7 •99	32 + 94	99 . 5	32+85	4 •66	32•75	305.	1753.	2181.	
α	SR	0•000	4.I7	9 9 •6	4.16	99 . 4	4.14	99 • 2	4.12	39 .	222	275.	
C/S	в с	0+115 0+115	21.94	0,0, 0,0,0,	21•66 24•49	96 • 1 96 • 1	19+20 22+03	93 .1	16.87 19.70	202. 228.	1109. 1260.	1347. 1535.	
N N	αso	0+ 083 0+ 083	00 90 90 90 90	00 00 44	30•65 33•71	0°26	28•54 31•59	94•7 94•7	26 29 29	285. 313.	1595. 1758.	1957. 2159.	
S/W	αu	0.052 0.052	16.34 18.34	0 0 0 0 0 0 0 0 0 0 0	16•25 18•30	6*76 97*9	15•43 17•48	96 • 96 • 4	14•62 16•66	151. 170.	851. 960.	1048. 1184.	
C/S/W	a R S	0+073 0+073	25.07 27.69	000 000 44	24•90 27•52	E • 16	23. 32 25. 93	ოო •90 66	21•81 24•42	231 . 256.	1298. 1438.	1594. 1768.	
IRRIG	IGATED	CROP ROT.	TATIONS										
U	α α υ	0+135 0+135	191.68 201.33	999 999 992	190•09 199•74	95 95 5	176•59 186•24	00 05 05 05 05 05 05 05 05 05 05 05 05 0	163 . 52 173 . 17	1768. 1858.	9882. 10396.	12118. 12758.	
S	ж Х	0.104 0.104	50•61 57•26	100 100 100 100 100 100 100 100 100 100	50+02 55+68	96•4 96•4	44.89 51.54	000 000 000	40.05 46.70	4666 528 •	2572. 2927.	3133. 3574.	
3	ж у	0•031 0•031	52•85 58•65	99 99 99 99	52 • 52 • 50 8 • 4 6 0	98• 6 98• 6	51.08 56.85	97•6 97•6	49 * 55•20	489. 542.	2779. 3086.	3436. 3819.	ç
C/S	ထိုက	0.115 0.115	173•85 182•00	ოო იი იი იი	172.66 180.81	96 . 11 96 . 11	162.35 170.50	93 . 1 93 . 1	152.60 160.75	1605. 1680.	9012. 9447.	11079. 11619.	92
C/S/W	a S S R	0•073 0•073	147•00 154•28	999 44	146.33 153.61	97•3 1 97•3 1	140•29 147•57	₽₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽	134.52 141.80	1359. 1426.	7688. 8076.	9487. 9970.	

TABLE 67. YIELD LOSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES ZMOI.

С К К К К К К К К К К К К К К К К К К К	158 158 122	YR 1	YEARLY Year	10	YEAR	AND MA	NAGE MEN YEA	T FOR 200	PROFIT 10	STREAM 100	10 YEAR 200
N X X X N X N X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X X N X X N X </th <th>12</th> <th>00 • 0 0 0 0 0</th> <th>99•1 99•1</th> <th>5 • 52 • 52</th> <th>94 94 94 9</th> <th>2 • 2 4 6 • 0 8</th> <th>7 • 06 7 • 06</th> <th>1.26 2.58</th> <th>•• ທ່ວ ທ່ວ</th> <th>240 440 •44</th> <th>252 206</th>	12	00 • 0 0 0 0 0	99•1 99•1	5 • 52 • 52	94 94 94 9	2 • 2 4 6 • 0 8	7 • 06 7 • 06	1.26 2.58	•• ທ່ວ ທ່ວ	240 440 •44	252 206
× × × × × × × × × × × × × × × × × × ×	12	0.00 0.00 0.00	56 66 66 66	2•94 4•77	95• 9 95• 9	1•68 3•51	92.7	0•47 2•30	45 6 6	134. 231.	150. 271.
Н 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	036	25• 78 28• 05	000 000 000	25•71 27•98	900 980 44	24•99 27•26	54.50 10 10 10 10 10 10 10 10 10 10 10 10 10	24•26 26•53	238• 259•	1357. 1478.	1679. 1829.
x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x x	005	14.75	69.7	14.75	99 • 5	14.67	ۥ66	14.58	137.	784.	975.
 × /ul>	007	3.14	99.6	3.14	99 . 4	3, 11	99•2	3 • 0 6	29.	167.	207.
х х х х х х х х х х х х х х х х х х х	134	16• 30 19• 13	2 • 5 5 • 5 5	15•99 18•83	95• 5 95• 5	13•39 16•22	92 •1 92 •1	13.71	150. 176.	805. 956.	967. 1154.
	760	28•77 31•82	mm • • • •	28•50 31•55	96 • 6 9 6	26 .1 4 29 .1 9	94 94 0	23 . 91 26 . 96	265 294 •	1476. 1639.	1805. 2007.
S/W SR 0 C 0 D C 0	061	19.86 21.91	00 00 00	19•75 21•80	7.79	18•73 20•78	95 • 39 9 5	17•75 19•80	183. 202.	1034. 1143.	1273.
RIGATED CD	085 085	23 . 26 . 09 09	0.0 • 0 4 4	23•28 25•90	96 • 9 96 • 9	21.50 24.12	94 94 94 8	19•82 22•44	241.	1208. 1348.	1480. 1653.
	P R0T	ATIONS									
00 80 0 0 0	158 158	154 86 164 51	11000	53•20 62•84	94•9 1 94•9 1	39•33 48•98	7 • 0 6 7 • 06	125•27 134•92	1427. 1516.	7909. 8423.	9656. 10296.
s s s s s	122	50 60 57 25	000 000 000	49.91 56.57	95•9 95•9	44 •0 4 50•70	92•7 92•7	38.46 45.11	466. 527.	2553 . 2908.	3098 3540
× 00 •	036	69+40 75+17	000 000 000	69 . 18 74.95	989 •89 44	67.14 72.91	97.e3 97.e3	65•07 70•84	642. 695.	3650. 3957.	4515. 4897.
C/S SR 0.	134 134	151•16 159•31	000 S	49.87 58.02	95 . 6	38 . 92 47 . 07	92.1 92.1	128•34 136•49	1394.	7786. 8220.	9543. 10084.
C/S/W SR 0.	085 085	137•25 144•54	99•4 1 99•4 1	36•50 43•79	96•9 10 96•9 10	29.81 37.09	40 44 0 0	123•48 130•76	1268. 1335.	7153. 7541.	8812. 9295.

TABLE 58. YIELD LDSS AND PER ACRE RETURN TO LAND AND MANAGEMENT FOR SOIL SERIES ZW13.

Cp THE VITLAL VITLAL	u C	*0 C		DAD AND PC	ב ב ב		U LAND	ANU MAN		FUR SUIL	. עדא וויע	2M13+		
7 0.2230 -3.07 98.4 -3.06 93.1 -7.88 95.4 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.47 -3.4<			ERCEN OPSOI	HE YIE AND TH R 1	C REW YEAR	INING (A Y Return R 10	TO LAN YEAN	THE I AND M 100	ITIAL NAGEME Ye	IELD T FO R 20	PRESE ROFIT 10	T VALU STREAM 100	TC YEA 200	I
R 0.177 $-1.4.7$ 99.0 -4.65 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4 $-1.6.04$ 99.4					8800 0	100 100 00 00 00 00 00	1100 ••••• •••••	7	លលេសក	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1004 1004	0440 0000 0100	1977 1977 1977	ł
R 0.053 13.01 99.5 12.93 97.9 12.11 11.31 $120.$ $674.$ $828.$ 7 0.027 4.63 99.6 14.75 99.6 14.75 99.6 13.76 $795.$ $973.$ 7 0.007 14.75 99.6 14.75 99.6 14.63 99.2 14.63 99.2 $435.$ $5635.$ $7045.$ 8 0.0004 10.877 99.65 12.087 99.65 12.336 99.44 $12.337.$ $783.$ $973.$ 9 0.0011 3.14 99.65 14.63 99.44 $12.337.$ $783.$ $973.$ 9 0.0011 3.14 99.65 3.100 99.44 $12.337.$ $703.$ $973.$ 9 0.0111 3.14 99.66 3.14 99.35 3.100 99.44 $12.337.$ $997.$ 9 0.0111 3.14 99.66 3.14 99.35 3.100 99.44 $12.337.$ $997.$ 9 0.0111 3.14 99.26 3.14 99.37 $12.335.$ 992.56 993.66 9 0.0111 3.14 99.26 3.14 999.66 3.100 999.66 $3.167.66$ 9 0.0111 3.14 992.66 3.14 999.66 3.100 999.66 $3.07.76$ 207.66 9 0.0112 3.14 992.66 3.100 999.66 $3.07.76$ $3.07.76$ 207.66 9 0.1422 10.192 0.122				4000	•••• ••••	4004 4004 40000	4400	0400 0000	0044	0000 0000	400 400 00 00 00		0.0000 0.0000 0.0000	
R0.007 14.75 99.6 14.63 99.2 14.63 99.2 14.63 99.2 14.63 99.3 3117 783.973R0.0011 3.14 99.6 $1.2.35$ 99.5 12.35 99.5 12.35 99.2 137 783.973R0.0115 5.44 99.6 3.14 99.5 12.355 99.4 15.17 655 6593 9253 R0.0195 6.444 99.3 3.10 98.3 -0.558 3.07 2.9 167 2.07 R0.0195 6.444 99.3 3.10 98.3 -0.558 3.07 2.9 167 2.07 R0.0195 0.544 99.3 3.10 98.3 -0.558 3.07 2.9 167 2.07 R0.0195 0.544 99.3 3.10 98.3 -0.558 3.07 2.9 167 2.07 R0.0195 0.544 99.3 3.554 0.577 99.3 3.07 2.9 167 2.07 R0.0142 10.095 99.3 3.554 12.095 99.3 3.077 2.9 167 2.07 R 0.0722 10002 99.3 3.554 10.221 13.266 2866 2866 R 0.0722 10002 99.4 10.221 10.221 1276 207 207 R 0.0122 10.025 99.4 6.256 $1.10.23$ 1786 1176 207			0000 ••••	50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000	0.0004 0.000 0.000	NN 000	400 400	VONN	00000 000	0100 0100		00.40	
R 0.195 5.44 7 0.195 5.44 7 0.195 5.44 7 0.0195 5.45 7 0.0195 5.79 8 0.54 9990 7 0.0195 5.79 8 0.54 9993 7 0.0142 10.0142 7 0.0142 10.0142 7 0.0142 10.0142 7 0.0142 10.0142 8 0.0142 10.0142 95.79 95.77 10.0172 8 0.0142 10.0142 95.70 95.74 95.73 95.72 15.016 93.97 10.01142 95.74 10.023 10.01142 95.74 10.023 10.01142 95.74 10.023 10.01142 97.7 11.0223 11.00122 99.95 11.0223 11.00122 99.95 11.0223 11.00122 99.95 11.0223 11.00123 99.95 11.0053			000	404 m	000 0	407 W	000 0	400 -	000 0	ี เกิด⊶ 0 •••• ∢ณฑ m	N09 0	0 10 N	1 00 M	
R 0.142 15.09 99.2 15.09 99.2 15.09 7 100.142 196.19 99.2 15.09 99.2 15.09 99.2 15.09 7 100.142 100.194 99.4 10.023 13.81 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4 99.4<			0000	0000 0000 0000	0000	00000 00000	4400	0.000		00000	10 00 m	20100	00 4 00 00 4 00	
R 0.089 8.61 99.4 8.61 99.4 8.61 99.4 8.61 99.5 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.8 73.3 56.7 541.6 55.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 320.5 56.1 56.6 3720.5 56.2 56.6 3720.5 56.2 56.2 56.2			**** 44//	0000 00000	0000 0000	10004 10004	00NN	00-00 0 0		00000	47.0.0 0.04	0 0 1 4	44 44 44 000	
R 0+124 12.07 59.2 11.83 95.8 9.75 92.6 7.76 111. 593. 709. 0+124 14.659 59.2 14.455 95.8 12.37 92.6 10.38 135. 732. 983. 1 0.124 14.659 59.8 12.37 92.6 10.38 135. 732. 983. 1 0.056 6.47 99.4 6.33 97.5 6.93 95.6 5.82 59. 412. 501. 1 0.053 2.47 99.4 2.34 97.6 8.23 95.6 7.26 52. 481. 594.			•••• 0000 00044	00000 •••• 0000	0.000 0.000	∉000m €00m €00m	မီစီစီစီ		4400	N M M M	6840 1984	5443 1119 1119	1001	2
	3		000N 000 000 000	0044	0000	1400 1400 1040 1040	00NN	N 0 0 0	លលំណា		1995 2991	0 17) 00	0800 08044	94

TABLE 68. (CONTINUED).

IRRIGATED CROP ROTATIONS

		ERCE	w	¥ U U	DNINI	O X V	H- 1	ITIAL	IFLO	PRESE		∢ υ
ROT.	đ	TOPSOIL LOST/YR	H H 0	YEARL Yea	Y RETURN R 10	-		NAG	200 200 200	101		
ر	a v	0 0	- 0 - 0	a.	7•6	M	1.5	۰ م	0•3	914	606	877
)) M (\ 				m	5	85.4	70.02	1003.	5423.	
			0.000	0	89.0	م	1.1	• N	2.01	829	660	677
	н П	0.116	93.81	6 6	92.73	96+0		•	1.8	64	149	295
ſ		- 1 - -	4 . 4	6	0 • •	4	6. 2	•	- 00 - 00	ទ	655	Ծ Մ
)				0	0	4	2.0	0	4 9		010	400
		.0	0 1	, o	11 11	9	2.7	•	8.7	37	36	64
	Ē	060.0	25+80	4 66	25+32	96 8	28+12	94.4	24+25	237.	0 10	007
Э		50	0 0	0	2.0		- 6 • 6	÷.	7.3	88	753	390
				0	8	~	5.6	•0	0 10	4 V	061	773
			5.1	0	0 0	80	Ó.	•	4.5	Ċ.	0 0	2
	Ъ	0+001	46.73	9.00	46.58	98.7	51+20	97+9	49.84	432.	0	0
270		0	0.8 - 1		06.5	4	3 . 5	e 8	8.7	94	440	200
7		\¢ +		0	4 - 7	4	1.7	• @	6.9	20	874	130
				J	00	6.4	9 Ja 4	m	0 •	25	5251.	6437.
	- -	660 •0	102.97	<u>m</u> •56	102.11	96.5 1	101+63	6 ° 26		950.	682	186
		0	5 ° 10	0	00-0	در	2 2	•	4.7	36	213	379
		10		0		5	0.0	0	2•0	40	601	862
	+ v v	0-066	04 00	4	77 - 56	67.5	90.83	95.6	86.33	871.	5008.	6173.
				0	v u	1	6.0	ផ	7	đ	101	650