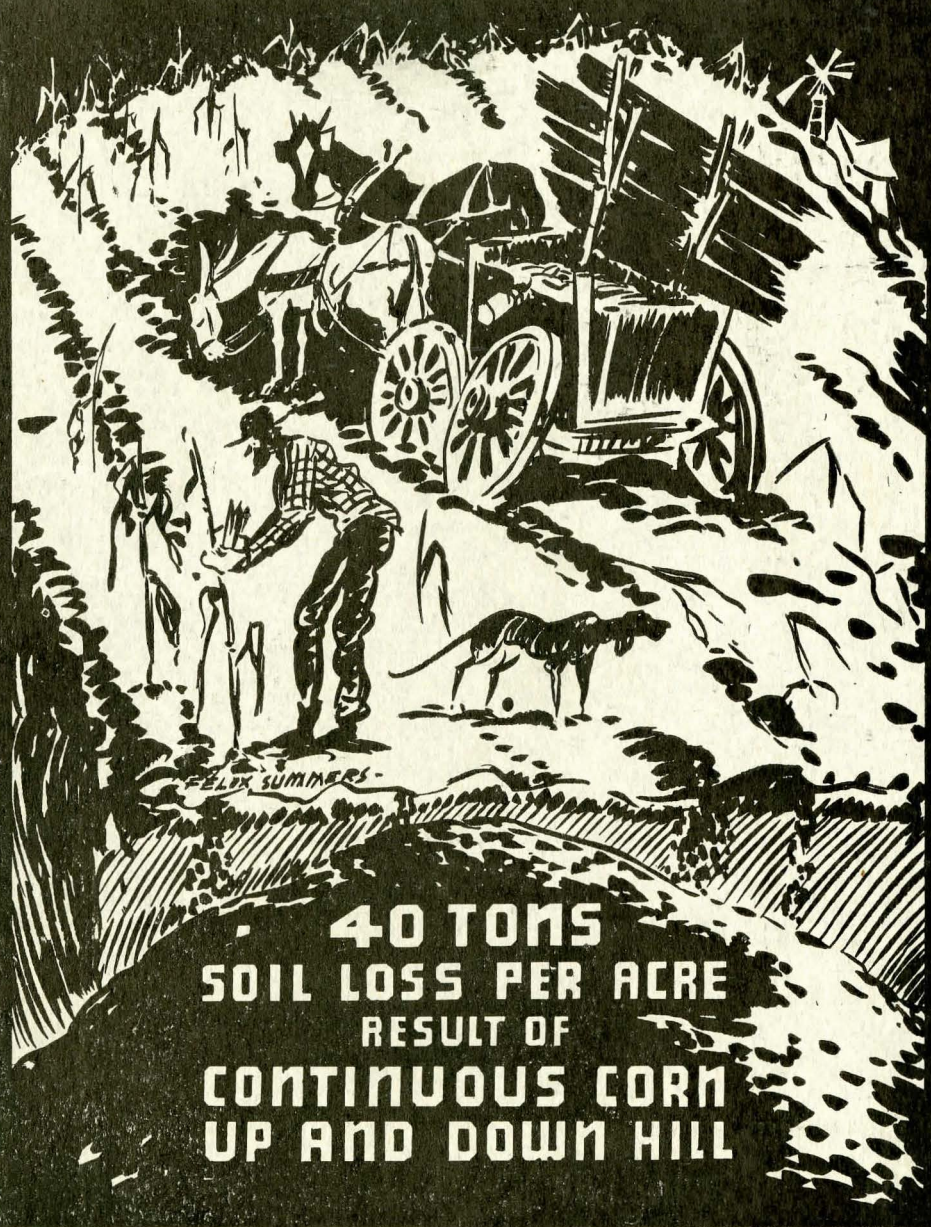


ANNUAL REPORT

• 1947 •

MILLS COUNTY IOWA SOIL CONSERVATION DISTRICT



District Commissioners



J. F. Wearin, Jr., Chairman
Hastings, Iowa

J. M. Steele
Malvern, Iowa

D. N. McGrew
Emerson, Iowa

Eugene W. Burdic, Secretary
Malvern, Iowa

T. J. Powell, Districts Conservationist
Shenandoah, Iowa

A S S I S T E D B Y

Ray W. Jones, Soil Conservationist
Malvern, Iowa

B. Jack Wederquist, Conservation Aid
Malvern, Iowa

The cover is illustrated by Felix Summers, a former employe of
Soil Conservation Service

Mills County
Soil Conservation District

HOME OF THE PLOW TERRACE BUILDING CONTEST

Mills County, Iowa



Seventh
Annual Report
December 31, 1947



E. THE Commissioners of the Mills County Soil Conservation District, respectfully submit this report of our activities and accomplishments during 1947, to the people of the district and to the assisting agencies. This has been a year of disastrous floods followed by prolonged drouth. The district confined itself to steady progress toward our goal of complete conservation on the land without any of the spectacular extra-curricular activities of former years. In view of the circumstances that transpired, that proved to have been the best procedure, for we were plenty busy getting the job done.

June of this year brought three torrential rains in an eighteen day period. It is just such a situation which a farmer is preparing for when he puts a complete conservation plan into practice on his land. Conservation farming minimizes the damage wrought to the land by such storms and at the same time maintains fertility and gives protection from lesser rains, all of which is needed. We do not claim that floods would be eliminated if all of the land were under complete conservation practices, but they would be materially reduced and the up-land areas would be in much better shape following such severe rains.

In order that the extent of the damage done this June might be known a land damage survey was made by the Soil Conservation Service technicians. The results of this survey are of such general interest to everyone in the county that we are including it in this report in its entirety by courtesy of the S. C. S.:

"LAND DAMAGE SURVEY — JUNE 1947 FLOODS"

Owing to the fact that the damage was in various forms in certain sections, the farm land of the District was divided into three areas: namely, Missouri Bottom Area - 27,900 acres; West Nishnabotna and Silver Creek Floodplain - 45,800 acres; and All Other Farm Land in County - 191,000 acres.

In collecting the data for such survey, a fairly close figure on the 1947 crops was also obtained:

Corn	123,000 acres
Wheat	13,400 acres
Oats	24,600 acres
Hay and Rotation Pasture .	61,500 acres
Miscellaneous Crops . . .	7,500 acres
Total Tillable Land . . .	230,000 acres

MISSOURI RIVER BOTTOM AREA — 27,900 ACRES

It is well to make one note on the damage survey of this area, that is that none of the damage listed was due to flood waters of the Missouri River. At no time during this flood period did the waters of the Missouri River break over the dikes, although at one period the water level of the Missouri River was six feet above the level of adjoining farm lands.

During the period of the three storms of June 1947 a high percentage of the Missouri flood plain in Mills County was inundated, the water coming from Keg Creek, Pony Creek and other small creeks from the hills and accumulated surface waters. On July 10th the water still covers 10,000 acres from six inches to one foot deep.

The flooding condition was caused partly from excessive runoff in the hills, but mostly is due to silted drainage systems and inadequate or no outlets. The need of this area is an overall drainage plan and proper outlets.

All parties interviewed stated that this was the greatest crop loss in this area since 1908.

The below listed figures were obtained by interviews with farmers who had farmed on the bottom for from thirty to forty years, from members of drainage boards, from highway and railroad officials and from county employees and officials; and a ten per cent detailed check by S. C. S. Technicians and Aids.

Deposition on bottom lands	6"	3,600 acres
Deposition on roads & railroads	1000 cu. yds. per mile	30 miles
Deposition in drainage ditches	6000 cu. yds. per mile	60 miles

Total loss by flooding: 18,000 acres

10,000 acres	90% loss	9,000 acres
6,000 acres	75% loss	4,500 acres
6,000 acres	50% loss	3,000 acres
5,900 acres	25% loss	1,500 acres

18,000 acres

Crops lost by flooding:

Corn	7,200 acres
Wheat	7,200 acres
Hay and Pasture	3,600 acres

WEST NISHNABOTNA & SILVER CREEK AREA - 45,800 ACRES

This area included the valley bottoms of these two streams, and in normal years is our high producing area. Streambank Erosion:

Acres removed from cultivation . . . 402 acres

Cubic yards of dirt lost . . . 5,480,000 cu. yds.

(The above figure was obtained by observing at least two locations per mile and by interviews with an average of one farmer per mile. The cuts found were then averaged for the length of the streams.)

Deposition on Bottom Lands:

Sand . . . Average 8" deep . . . 800 acres

Silt . . . Average 12" deep . . . 4000 acres

Deposition on Roads and Railroads - 1000 cu. 30 miles
yds. per mile

Deposition in Drainage Ditches - 6000 cu. 18 miles
yds. per mile

Total loss by flooding . . . 15,800 acres

Crops destroyed by flooding:

Corn . . . 6,500 acres

Small Grain . . . 3,500 acres

Hay and Pasture . . . 5,800 acres

ALL OTHER FARM LANDS — 191,000 ACRES

This area includes all farm land in Mills County other than the Missouri Bottom Area and the Nishna and Silver Creek valleys.

Gully Erosion:

Active major gullies in District . . . 1040

New length at head of gully . . . average 40 feet

Acres removed from cultivation . . . 338 acres

Cubic yards of soil lost . . . 832,000 cu. yds.

Sheet Erosion:

Average 10 tons per acre, 191,000 acres - 1,910,000 tons

From detailed field surveys the erosion loss was plotted thus:

Corn 48,940 acres at 20 tons per acre

20,000 acres at 10 tons per acre

20,000 acres at 5 tons per acre

Small Grain 17,680 acres at 10 tons per acre

Hay & Pasture 19,320 acres at 1 ton per acre

Roadside Erosion - 1000 cubic yards per mile - 500 miles

Deposition in Upland areas - average 4 in. - 4500 acres

Deposition on Roads and Railroads - 300 cu. yds. 20 miles
per mile

Crops destroyed by Erosion:

Corn 17,788 acres
Small Grain 884 acres

The above loss varied from a total loss in small areas to a 5% loss by washing out and silting over in others. The detailed survey showed an average 20% loss in corn stand for the corn acreage of 88,940 acres, and a 5% loss in the 17,680 acres of small grain.

Miles of terraces damaged 40 miles
Total miles of terraces in District . . . 703 miles

The damage to terraces varied from the extreme breaks in some newly constructed terraces to one small break in a low spot in others. We find 90 per cent of the serious breaks occurred in those terraces constructed in the spring of 1947, with the severe breaks occurring where the land had been in sweet clover and plowed prior to the terraces having been laid out and constructed.

In closing this narrative, we set forth the three heavy storms of June, 1947, as recorded:

June 4th . . 5.31 inches Intensity . 3.58" per hour
June 12th . . 4.40 inches Intensity . 2.0 " per hour
June 22nd . . 3.54 inches Intensity . 2.0" in 30 min.
* * * * *

The survey shows very clearly the extent of the damage suffered by the county and goes far toward showing how much would be saved by complete coverage of the area by good conservation practices. It is the goal of your district commissioners to get that complete coverage in as short a time as possible.

In this connection it might be well to point out the present accomplishments in this direction that have been made in the six years of district operation and previously under the old Soil Improvement Association and the C. C. C. Briefly, we have about 20% of the needed work done. In the past few years the farmers of the district have made great strides in improving rotations and general land use. We feel that most of the credit for this improvement must be given to the individual farmer for his sincere interest in his soil. We do think that this interest has been aroused by some of the work done by the district and by the increased attention given to the problem by many newspapers and magazines in recent years.

A previous survey of the county made in 1945 showed that we needed 7,211 miles of terraces, 612 miles of grassed waterways, 116,400 acres of contouring, and 123,000 acres need application of lime, for a few examples.

We have constructed a total of 830½ miles of terraces, 34 miles of grassed waterways, and this year had a total of 46,300 acres of contoured corn, and we have supervised the application of lime on 7,748 acres.

One of the most important ways we commissioners have of arriving at an appraisal of progress in the district aside from the figures of actual accomplishments, as shown in the summary at the end of the narrative, is a comparison of the demand for assistance on hand at the beginning and at the close of a year. On January 1, 1947 we had 154 active applications for plans on file. During the year 32 complete plans were written and there were 149 applications on file at the end of the year. In other words, new interest is being shown at about the same rate as plans are being written, and at a rate comparable to that of recent years. With present personnel there is not much prospect of running out of work in the near future. From our point of view this is a very healthy sign and one which gives us much encouragement for the continued growth of our program.

There is, however, one aspect of the problem which is of grave concern to us. That is the question of getting this work done while the interest is still active, and while farmers still have enough money so that they feel they can afford to spend it on work, the results of which may be in the future. This is not just idle talk for at the present time we are very much behind the demand, and it is hard for many to understand why they have to be put off so long. At the present time there are 149 active applications with rough starting plans which are waiting for complete plans and layout of practices. We have requests for 367 miles of terraces, two miles of diversion terraces, eight miles of drainage ditches, fifteen miles of grassed waterways and 7,600 rods of field boundaries on hand. We have but two men on the staff and six men could keep busy for a year just on the field work mentioned above. We commissioners think that the importance of the conservation work in this county to the peo-

ple of the nation is great enough to warrant an increase in the number of men assigned here by the Soil Conservation Service.

We also believe we were well justified in instituting the service-charge on terrace and drainage layout work which was begun last July. This charge enabled the district to employ one man to assist the technicians with this work as a rod-man, and thereby speed up such work considerably. The farmer directly benefitted was thus made to stand a part of the cost of the work.

We are rather proud of the fact that we were able to come so close to estimating that cost from Mr. Jones' recommendations. The charges made, as per public notice in the newspapers, were at the rate of one tenth cent per foot (.001) for terrace layout and twenty-five cents (.25) per acre for drainage layout. From this charge we collected a total of \$404.01 and paid out for help a total of \$417.60.

At the present time it is difficult to estimate how long it will take to complete the job of meeting the need for soil conservation here. As stated above, we have accomplished about twenty percent of the work. Were we to use the number of farms with complete plans (148) as our yardstick, that percentage would drop to more nearly 10. Fortunately there are a great many more practices in use on land than just those which are covered by complete plans. It is apparent that there will always be a certain percentage of farms which will not be farmed under conservation methods, so long as the present voluntary program is in force. What the future holds as regards any change in the program no one can foresee. The present voluntary basis is working very well, so well, in fact, that we can no where meet the demand and should keep the district very busy for another fifteen to twenty years.

Of course, once we get all of the farms under plans, there still will no doubt be justification for the continuance of the district as new problems will arise which will need continued solutions.

We turn now to a more factual recounting of the year's events in the district. Early in the year Mr. McGrew attended the second Commissioners short course held at Ames by the Mississippi Valley Assn. He reported

that much of value was discussed there, and we commend the Mississippi Valley Assn. for its efforts in this regard.

Since June the district has had the loan of a war surplus TD-18 tractor, power control unit and bulldozer which had been released to the S. C. S. The outfit was rented to various conservation contractors who used it some 970 hours on earth fills, terraces and waterways. The contractors paid a nominal rental fee to the district which set aside about 60% of the returns for future repairs and retained the balance for use in the district. This is the unit which accounts for the fact that the district has a bank account.

Speaking of bank accounts leads us to mention the fact that early in the year the Malvern Trust & Savings Bank, through the assistance of Mr. Ray W. Jones, published a booklet of unusual interest to its farm customers entitled, "It's Time to Open a Soil Savings Account". The booklet gives in condensed form a good many reasons for and explains how to open such an account. We quote a pertinent point from Mr. Burdic's, "A Personal Word", on page two of the booklet, "It is our firm opinion that only through an adequate supply of cattle, hogs, and sheep on our farms that we may fully utilize the benefits of a full crop rotation program." We commissioners heartily commend this institution for its intelligent interest in the soil of our county and for the boost it gave our program by publishing the booklet.

An interesting sidelight to the district's activities is the fact that this district was asked to furnish the operators for a terracing demonstration in the Scotland County, Missouri, Soil Conservation District. Mr. Jones took four men from here to operate terracing equipment at a Conservation Field Day near Memphis, Mo., on September 16, 1947. Those going with Mr. Jones and the equipment they demonstrated were: H. F. Clark, Malvern, Ford tractor and disc terracer; Ralph Scott, Malvern, John Deere Disk Tiller; Russell Bird, Malvern, Whirlwind terracer; and Luther Munsinger, Tabor, John Deere tractor and mold board plow.

Of interest again this year to many Mills County farmers was the July Field Day at the Conservation Experimental farm near Clarinda. This field day which al-

ways comes at a very busy time just before the oat harvest, is of pertinent informational value to all farmers in this area, because the studies being made there are so very basic to our own agronomic and cultural problems. In October, the second annual Pasture-Cattle Feeders day was held at the farm. This event attracted a great many more men from this area who are particularly interested in cattle feeding. The pasture utilization experiment being carried on there has already become of considerable use to us in our own local program because they show a great deal of what may be expected from brome-alfalfa pastures in this area. We know that that experiment has helped us "sell" brome-alfalfa and red clover-brome in our rotations in this county.

A considerable share of the credit for getting conservation on the land must be given to the seven conservation contractors who are operating in the district. These men have done good work and have cooperated with the district quite well in maintaining standards which we think are necessary. We are glad they are here and we shall continue to cooperate to the fullest extent with those who do a good, standard job.

The P. M. A. with its payment program for conservation practices has been helpful in getting practices such as terracing, waterways, drainage, and liming on the land. The fact that the County Committee has insisted upon maintaining very high standards of performance in all of these practices by refusing to count any of those that did not meet our specifications, has been of great assistance to us.

During the year we have enjoyed wonderful cooperation with Amy Hammers, the County Superintendent of Schools, and again wish to thank her for her very excellent program of conservation being taught in the rural schools.

We appreciate the cooperation and assistance of the Farmers Home Administration and we have had excellent cooperation from their clients and cooperators.

The Mills County Farm Bureau, as in the past, has continued to include in their resolutions a considerable part of the District's recommendations pertaining to soil and soil management. And the County Officers of the Farm Bureau are numbered among our best cooperators.

While the Natural Gas Pipeline Company did not do as much work on farms through which their lines pass as they had done in former years, we understand that this is due to increased demand in other Districts, and we shall continue to appreciate their assistance to this particular group of cooperators.

The Malvern Commercial Club and the Glenwood Chamber of Commerce have cooperated in presenting factual data to the local communities and have been most generous in their assistance when called upon.

The "Country Gentleman" recognized our efforts in their February 1947 issue in an excellent article on "Conservation by Agreement." The article set forth the objective and form of our conservation lease rider. While the lease rider is not used by all farmers, it is filling a need for landlords and tenants in arriving at the division of costs and maintainance of conservation practices.

In conclusion, we should like to say that as the old year ends and a new one begins we have no very original ideas for getting out from under the big work load. The men on the staff are budgetting their time and using it in a very efficient manner; they have worked out a simplified plan form which requires far less paper work time; and in general are going about the job with great zest and energy.

We do want everyone to understand that while we may talk of being swamped with work, we still are looking for any and all new business which we can possibly get. We can and will spend time with anyone who is sincerely interested in getting started on conservation, to the fullest extent of our abilities.

MILLS COUNTY SOIL CONSERVATION DISTRICT

By J. F. WEARIN, JR.

Chairman, District Commissioners

The signing of this Annual Report was authorized by a resolution of the District Commissioners, adopted at the regular meeting on January 20th, 1948.

By EUGENE W. BURDIC

Secretary, District Commissioners

Summary of Work Accomplished

Item	1947	Total to Date
Number of farms with conservation plans	32	148
Acres	7,678	32,321
Number of farms with starting practices and active applications . .	149	297
Acres	31,593	63,914
Amendments to existing plans . .	35	35
Acres	7,099	7,099
Contouring supervised, Acres . .	4,129	46,300
Terraces laid out and constructed, Miles	197.5	830.5
Drainage, surveyed and constructed, Acres	912	4,491
Lin. ft.	16,512	142,989
Cu. Yds.	33,050	119,740
Sod Waterways, laid out and constructed - Lin. Ft.	52,125	179,520
Diversion terraces, laid out and constructed - Lin. Ft.	8,800	24,515
Lime Applied to Cropland - Acres .	1,953	7,748
Tons	4,296	17,045
Group demonstrations on farms, No.	4	92
Attendance	36	509
Conservation information meetings, Number	6	91
Attendance	154	5,036
News articles released	12	128
Commissioner meetings	8	54

830.5
2834
10439

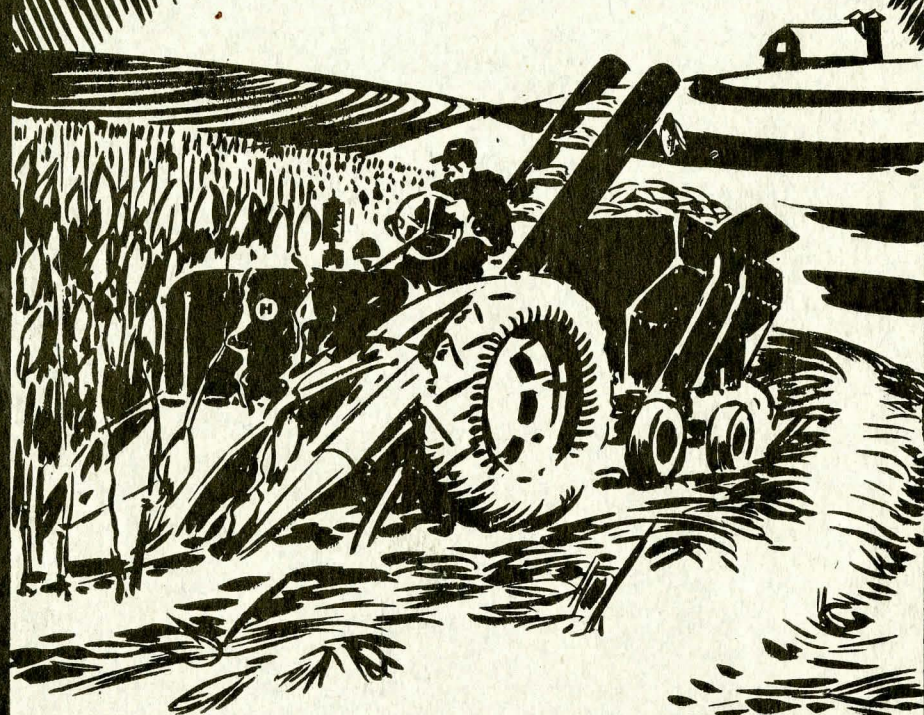
SUMMARY OF WORK LOAD

	Amt. on Application	Can be Accomplished with Present Staff
Terraces	367 miles	126 miles
Diversion terraces . . .	2 miles	1 mile
Drainage	8 miles	1 mile
Farm Watercourse . . .	15 miles	4 miles
Field Boundaries . . .	7600 rods	3600 rods
Other Practices	641 man days	110 man days

SUMMARY OF FLOOD DAMAGE

	Acres Damaged	Crop Damage
Missouri River Bottom Area . .	18,000	\$ 900,000
Nishnabotna & Silver Creek Area	15,800	750,000
All Other Farm Lands . . .	18,672	1,600,000
Damage to Roads & Railroads .		1,250,000
Damage to Drainage Ditches . .		500,000
Soil lost by Erosion . . .	8,222,000 Tons	?

**CORN IN ROTATION
CORN·OATS·MEADOW
• TERRACED •**



**ONLY
1 TON
SOIL LOSS PER ACRE**

