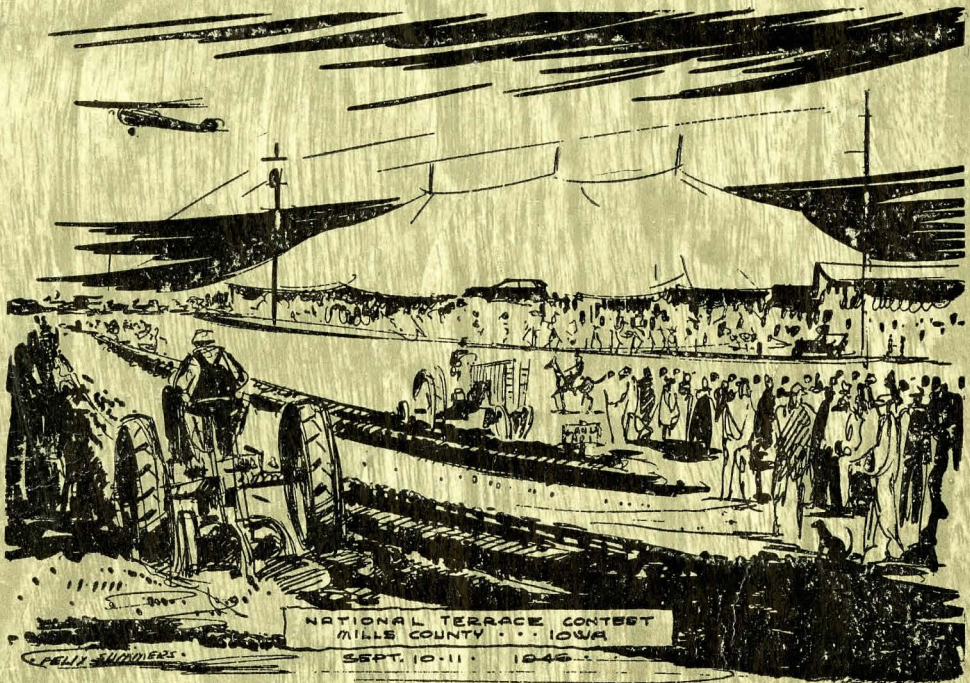


1946

Mills County
Soil Conservation District

Mills County, Iowa



HOME OF THE PLOW TERRACE BUILDING CONTEST



ANNUAL REPORT

DECEMBER 31, 1946

District Commissioners



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

J. M. Steele
Malvern, Iowa

D. N. McGrew
Emerson, Iowa

~~John H. Longstreet~~, Secretary
Malvern, Iowa

T. J. Powell, Districts Conservationist
Shenandoah, Iowa

ASSISTED BY

Ray W. Jones, Soil Conservationist
MALVERN, IOWA

~~Felix D. Summers~~, Conservation Aid

B. Jack Wederquist, Conservation Aid
MALVERN, IOWA

Mills County

Soil Conservation District

HOME OF THE FLOW TERRACE BUILDING CONTEST

Mills County, Iowa



SEVENTH
SIXTH

ANNUAL REPORT

DECEMBER 31, 1946

1947.

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WE, THE Commissioners of the Mills County Soil Conservation District, respectfully submit this report of our activities and accomplishments during 1946 to the people of the district and to the assisting agencies. In every department of our district program we have made progress this year. The total number of completed plans and plans in process is larger than a year ago, as are the number of miles of terraces, the acres of contouring and the acres of improved rotation.

At the beginning of the year we had certain hopes and intentions as to the work to be accomplished. We thought that the most important thing was to speed up as much as possible the application of sound conservation practices in the county, at the same time remembering not to sacrifice quality of workmanship. It has long been our contention here that it is preferable to move a bit more slowly than might be possible and do a job that will stand the test of time, than to scatter our energies in a hurry over a wide area in such a way that the work will soon have to be redone.

With these thoughts in mind our technicians made a detailed study of time distribution for each month of the year. The fact that they were obligated on past plans and commitments to a work load nearly equal to the total working time presented a problem. We all thought that these old obligations must be met in order that the farms which had these plans might continue to be improved. However, it was also necessary to continue with as many new complete farm plans as possible. Consequently, a quota of 41 plans was set up for this year. On the face of it this looked as if we were asking the impossible of the technicians, but by good management and much hard work and extra hours they made a very satisfactory amount of progress. They wrote 36 farm plans covering some 8,185 acres. While this number falls short of the quota, the number of acres involved far exceeds the normal expectations for that number of plans. A number of the farms have been large and, consequently, have required considerably more planning time than usual.

58 miles
indented 10

One plan deserving special mention is that of the Glenwood State School farm, the first Iowa state institution farm to apply to a soils district. This plan was work-

ed out for the State Board of Control. It was a very difficult plan to make because the topography of the land is very rough, the farm is large, 1,060 acres, and the requirements included pasture for 250 dairy cows, pasture for 450 hogs, 500 tons of hay for dairy cows and 100 tons for horses and mules, 900 tons of ensilage, 200 tons of bedding, and 120 acres in garden crops. For a starting practice preceding the plan, 327 acres were seeded to alfalfa-brome grass mixture. The final plan includes a five year terrace building program, seven miles to be built each year. Such a plan necessitates a great deal of work on the part of the technicians. Perhaps they should have available some extra technical assistance on that kind of a job.

The district now has a total of 116 completed farm plans covering some 24,643 acres, with a backlog of starting plans or plans in process totaling 154 and covering 37,161 acres. The latter are on farms for which we have active applications for farm plans; that is, the farmer has complied with the first requirements. In our district a farm plan now has to be earned. The farmer has to start farming on the contour, laying out terraces and using a good rotation in order to get his plan.

The continued demand on the part of an ever increasing number of farmers for assistance proves that general interest in the conservation program is growing, and it is possible for us to concentrate more on filling our orders and less on salesmanship or educational programs. However, we do not mean to imply that we think the educational program is completed; on the contrary, it must be continued in full force. We can rely more, however, on the efforts of other groups such as the press and civic and business organizations, many of whom are doing outstanding jobs.

After this slight digression, we return to our discussion of the application of conservation practices. More and more farmers are coming to realize that the basis of all successful farming is the use of proper rotations. On farms which have been planned it has been increasingly easy to sell longer rotations with a higher percentage of grass and leguminous acreage. We attribute this fact to the increased use made of the research at the nearby Clarinda Experimental Farm and on local test areas, as well as the cumulative spread of favorable

results obtained by the farmers who have already been using conservation methods for some time.

Our main program on farms with approved applications or starting plans has been guidance in regard to rotations which will fit into the eventual plan. In addition to this we have had a terracing, contouring and waterway program on farms in this category. While it might have been possible to write a few more plans on these farms, we commissioners have been so interested in the quality of the finished plan that we have discouraged any ideas of hurrying through with sketchily made plans. As one of our members is wont to say, "A baby has to crawl before it can walk"; so must a farmer learn to contour cultivate before he can know what he needs in his long-time conservation plan. We have been borne out in this belief by experience. The men who thoroughly understand the problems and advantages involved in conservation farming before completing their plans have been our best cooperators. Thus, we are in reality making the best use, from a long-time point of view, of our technical assistance by not writing plans at random, and the plans in our files represent active conservation participation in a high percentage of cases.

Let us now turn attention to the educational program which we carried on during the year, and enumerate the things done by other agencies in the district which contributed to our program. Perhaps the outstanding event in our year was the 1946 National Plow Terrace Building Contest which was sponsored jointly by the Omaha **World-Herald**, the Omaha Chamber of Commerce Agricultural Department, the Omaha Farm Equipment Club and the Mills County Soil Conservation District. You will find the published report of the contest in the appendix to this report. Briefly, the Omaha groups furnished the money and the moral support and gave our local committee great latitude in carrying out the details of the show. The committee of the whole did set forth a number of general policies by which we were guided. The rules and regulations for the contest were those developed by a committee of the American Society of Agricultural Engineers. The contest proved to be a big success in that we had a total of 36 contestants in the field, the quality of the terraces constructed was very good, we had a huge crowd of intelligently interested

spectators, and the press and radio gave us excellent coverage and cooperated in helping do the thing for which we originally set up the contest, namely, to interest a large number of people in conservation.

Here we might add that earlier in the year the district put out on request a leaflet, "Suggestions for Conducting Terrace Building Contests." Over 1,200 copies were mailed to interested groups.

The district cooperated with the Farm Bureau and The Malvern Leader in sponsoring the Farm Institute again this year. It was a three day meeting at which various men from Iowa State College and the Soil Conservation Service presented new materials on the following topics:

1. Farmstead Development and Planning
2. Outlook Information
3. Soils
 - A. Fertilizer
 - B. Conservation Cartoonist
 - C. Dr. Browning, Plans for the Research Program at the Clarinda Experimental Farm.
4. Poultry

The entire program was well received by the public with an especially large attendance at the poultry discussion.

The field days at the Clarinda Experimental Farm were of much value. During July over 50 farmers from this county visited the farm, and there were additional visitors in October and at other times. The cattle studies of pasture utilization were of particular interest to many, and we are glad to have been able to help in arranging for these studies. They are pertinent to our erosion problem in that they give us information on how to economically use larger acreages of hay and pasture.

The Extension Service and the Soil Conservation Service have cooperated for several years in developing and maintaining grass plots of various kinds. The one-acre brome grass plots, seeded in 1943, are still of value for observation purposes, particularly that on the D. C. Deitchler farm. This plot is on a very steep hillside and the erosion control ability of the grass shows up very well. The small replicated plots on the J. M. Steele farm are quite valuable in that they give farmers an opportunity to compare varieties. A new seeding was made there

this fall of replicated plots about a rod square using alfalfa, sweet clover, red clover, ladino clover, and birds-foot trefoil for the legumes. Brome grass, orchard grass, alta fescue, intermediate wheatgrass and Reed's canary grass were seeded with these legumes. We held a field day during the summer which was attended by about 30 farmers, and during the season a great many more visited the plots.

Some work was done with commercial fertilizer, but most of the results obtained were not measurable. However, one plot gives us an indication of what can be expected when nitrogen is applied to sod-bound brome grass. This study was made on a three year old sod-bound field of brome on the Henry Washburn farm. In late April a portion of this field was treated with a 32½ % nitrogen fertilizer in replicated plots in amounts varying from: check, 100 lbs., 200 lbs., and 400 lbs. of the fertilizer per acre. The plot was sampled in June by Dr. Nelson of Iowa State College. The amount of dry hay collected from a 30 inch strip the length of each plot was as follows:

Check, or no treatment —	.54 tons per acre
100 lbs. —	1.35 tons per acre
200 lbs. —	2.00 tons per acre
400 lbs. —	2.55 tons per acre

Since this particular field is a seed increase plot, we were interested in observing any increases in seed production from these applications. From this one study it is quite apparent that the formation of seed on these nitrogen starved fields is directly proportionate to the fertilizer applied up to a certain point, beyond which increased application of fertilizer does not seem to have any effect.

We have been fortunate in having a great deal of cooperation from other agencies in the district in pushing our program. The A. A. A. by its payment program played a major role in increasing the acreage of contouring, the miles of terraces, the number of grassed waterways established, and the use of green manure. Of great importance, too, is the fact that they insisted upon maintaining very high standards of performance in all of these practices by refusing to count any of them that did not meet our specifications.

Miss Amy Hammers, the County Superintendent of Schools, has for a number of years taken a very active part in presenting conservation studies to the rural pupils. Several years ago she wrote one of the first, if not the first, conservation handbooks for grade school students to be used in the state. This year that work has been carried out again. Rural students have made an extensive study of conservation as a part of their science work, using an outline from the Soil Conservation Service. The children made conservation booklets in which they collected conservation articles and pictures from magazines and newspapers. They studied maps and made observation tours. All areas of the county were covered, for approximately 540 children took part in the project. We commissioners are appreciative of Miss Hammers' efforts and of her thought that "the work of soil conservation is of major importance and all that we can do to make the youth of Mills County conscious of its importance is well worth-while."

The Farmers Home Administration is asking and insisting that their farm ownership families become co-operators with the district, and in the future a purchaser will have to agree to carry out a complete conservation plan before he gets his loan. This agency urges its tenant borrowers to contour all intertilled crops on rolling land, and most of them do so.

The Mills County Farm Bureau, realizing the importance of conservation, has included in their resolutions a considerable part of the district's recommendations pertaining to soil and soil management. That group also materially assisted in putting on the terracing contest.

The Mills County Board of Supervisors has been co-operating with us by using our recommendations for roadside grading and seeding of the banks. This plan not only reduces roadside erosion, thereby lowering maintenance costs, but also makes weed control much easier for the farmers, in that most slopes are mowable with machines.

The Natural Gas Pipelines Company has built 55,575 lineal feet of terraces on farms through which their lines pass. This is a protective measure for their pipe of a permanent nature which they have built according to our specifications and have donated to the land-owners. They have also constructed 611,800 square feet

of waterways, even to furnishing and seeding of the grass seed, under the same program.

The Mills County Forum has cooperated by presenting conservation facts to the heads of all civic organizations.

The Malvern Commercial Club and the Glenwood Chamber of Commerce have cooperated in presenting factual data to the local communities; they have sponsored special conservation editions of the local papers through advertising, and they assisted in putting on the terracing contest.

Early in the year the Mississippi Valley Association sponsored a four day conservation short course for commissioners from all over the state which was held at Iowa State College. Two of your commissioners attended this course and found it to be very helpful. Not only were the topics presented pertinent and informational, but the association with other men from all parts of the state who were of kindred spirit as regards conservation was very inspiring. We think that everyone there came away with more determination than ever to push conservation. We heartily commend the Mississippi Valley Association and its personnel for their splendid efforts in this matter.

As we conclude the year's work we look forward to an ever increasing demand for conservation assistance. The number of active applications for plans on file is the largest of any time in our history. Four points are of interest: (1) 18% of the farms in the district have complete plans or starting plans, (2) 10% of the needed terraces are now constructed, (3) there is a noticeable improvement in land use among a large percentage of farmers, and (4) more sod forming grasses are being added to legume seedings.

MILLS COUNTY SOIL CONSERVATION DISTRICT

By J. F. WEARIN JR.

Chairman, District Commissioners

January 9, 1947

The signing of this Annual Report was authorized by a resolution of the District Commissioners, adopted at the regular meeting on January 9, 1947.

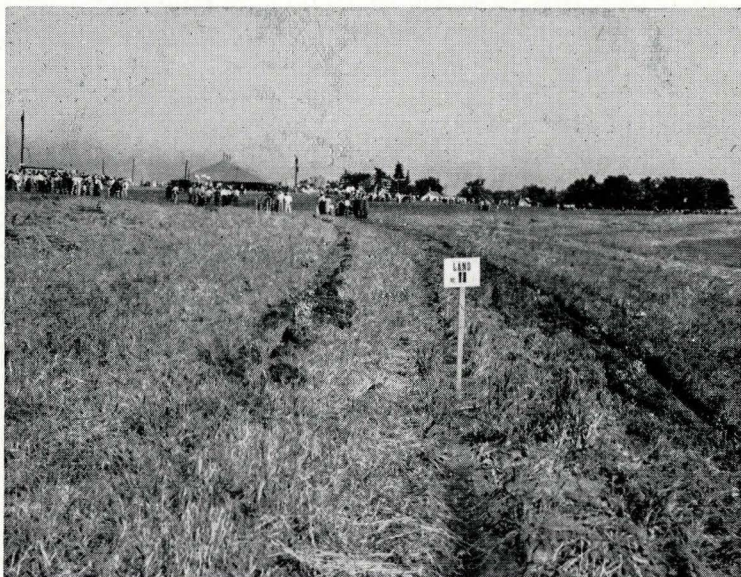
By JOHN H. LONGSTREET,

Secretary, District Commissioners

Summary of Work Accomplished

	1945		1946	
	No.	Acres	No.	Acres
Number of farms with conservation plans - -	80	16,458	116	24,643
Number of farms with starting practices — applications - - - -	117	25,062	154	37,161
Complete conservation plans written - - - - -	35	7,266	36	8,185
Active applications on file -	117		154	
Contouring supervised on planned farms - - -		4,646		3,108
Estimated total acres contour corn - - - -		41,500		42,200
Terraces laid out and constructed, miles - -		142		216
Total terraces Mills County to date, miles - - -		417		633
Drainage, surveyed and constructed, Lin. Ft. -		58,128		52,049
Cu. Yds. -		38,716		27,974
Waterways laid out and constructed, Lin. Ft. -		16,500		67,170
Sq. Yds. -		99,000		440,917
Diversions laid out and constructed, Lin. Ft. -		4,875		5,840
Lime applied to cropland, Tons - - - - -		1,005		2,590
Acres - - - - -		500		1,295
Group demonstrations on farms, Number - - -		25		2
Attendance - - - - -		185		28
Tours conducted for farmers, Number - -		4		4
Attendance - - - - -		83		218
Conservation information meetings, Number - -		19		7
Attendance - - - - -		1,251		467
News articles released		20		51
Radio transcriptions		2		15
Commissioners meetings,		8		8

Building a Terrace with a Moldboard



- 1 Ezra Neben of Murdock, Neb., was assigned Land No. 11 at the National Plow Terrace Building Contest, 1946. Here is the way it looked before the starting gun. Each land was staked out in advance by Soil Conservation Service Technicians.



- 2 Ten minutes after the contest started Mr. Neben's terrace was beginning to take shape. He used the technique of throwing the earth toward the center as he went along. Some entrants plowed the entire terrace area first, then started the heaping up process. Both methods produced good terraces.

Plow . . . in Less than Two Hours



- 3 An hour later the angle of the tractor shows the back slope of the terrace. The assistant is pacing off the distance from the uphill side of channel to the terrace ridge. Overly high terraces were not required here as the slope was not steep.



- 4 Finished after 1 hour and 58 minutes, Mr. Neben parked his tractor and looked over his terrace. Though not a top prize winner, Mr. Neben had built a neat, satisfactory terrace with ordinary farm equipment. It was 24 inches high, had a channel area of 27 sq. feet and a cost of \$1.73 per 100 lin. feet.

PRINTED IN MILLS COUNTY BY THE MALVERN LEADER.

