1950
ANNUAL REPORT

Poweshiek County Soil Conservation District

Brooklyn, Iowa

The Commissioners of the Poweshiek County Soil Conservation District present a report of activities and progress in soil conservation for the year 1950 to farmers and all cooperating groups and others in county and state interested in saving soil, water and proper land use, and the outlook for 1951.

THE DISTRICT GOVERNING BODY

Elmer Dunnick, Montezuma, Iowa . . . . . Chairman
J. J. Boatman, Montezuma, Iowa . . . . . Commissioner
Howard Sears, Malcom, Iowa . . . . . Commissioner

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The Poweshiek County Soil Conservation District has now completed five years of work and developed a program which is answering a need in a creditable manner.

During the past five years a considerable change has taken place in manner of operation in Poweshiek County which in a large measure can be traced to educational and technical work of the soil district.

The number of completed farm conservation plans shows progress but does not include the picture of the amount of soil conservation that farmers without plans have also done. This came about from observation of field days, educational programs, and of seeing successful results of work done by neighbors with complete plans in operation.

The number of grass waterways, farm ponds, and structures has shown a great increase in 1950. There is more consideration given to good rotations, grass seed, production, wild life, and forestry.

The commissioners are also pleased to see the cooperation of the PMA in so far as is possible for them to assist us in this work.

The commissioners were pleased to see use made of heavy earth-moving machinery in Poweshiek County, and also for the initiative of the owners of such machinery who saw the field of opportunity opened to them for work of that type. This has resulted primarily from better farm income and a Soil Conservation District in Poweshiek County.

The group policy adopted by the District is still achieving desirable results, but a revision of that policy may eventually have to be made in order to more fully achieve the complete program of the District.

The district commissioners are very grateful to the State of Iowa for the appropriations for clerical and technical assistance and for some equipment. This has made possible a set of office records, file, camera, and other items. We have also been able to start a follow-up program on the older planned farms that was needed very much in some cases. It also provided service or assistance to other cooperators, which for various reasons had not called on the district for help, and it furthermore allowed more time for the farm planner to work on new plans.

Your district has as commissioners: Elmer Dunnick, Howard Sears, and J. J. Boatman. Morton James, Farm Planner; Archie Casebolt, Conservation Aid; and Lyall Mitchell, District Conservationist of the Soil Conservation Service have given assistance with the technical program. Loren Brown, County Extension Director, of the Extension Service, has taken the lead on the educational program. Loren Shaw has been employed on state funds under conditions set forth by the State Conservation Committee for use of State appropriations.

EDUCATIONAL ACTIVITIES

During the past few years, the need for increased educational activity in soil conservation work has been recognized by agricultural leaders in the county, and considerable emphasis has been placed on carrying out various soil conservation programs. The Poweshiek County Soil Conservation District, organized in 1945, has played a big part in this program. There is still much to do and farmers are becoming more and more conscious of their needs each year as the job is made easier.

Along with the soil conservation program goes the need for better rotations, better crop production methods, utilization of roughages and pastures, insect and weed control, and the use of commercial fertilizers. Work has been carried out by the Extension Service on all these subjects during the past year.

The soil conservation program is a cooperative enterprise between the Extension Service, Soil Conservation Service, and the Soil Conservation District. The County Extension Director served as Secretary of the County District, and as a representative of the Extension Service directed the educational work. Soil conservation work in Poweshiek County has been developed around local groups. The Extension Service has taken an active part in the organization of new groups. During 1950 new groups were organized in Chester, Sheridan, Pleasant, Warren, Jackson, Grant, and Madison Townships.

A Soil Conservation Tour was held the 8th of August. Stops were made at the Millard Farmer farm in Pleasant Township to observe a farm structure; at the Bruce Livingston farm in Jackson Township to see grassed waterways and a farm pond; at the Lauren Wright farm in Jackson Township to observe a complete farm plan in operation including contouring, terraces, grassed waterways, multiflora rose, and reed canary grass sod banks. Stops were also made at the J. J. Boatman farm and Ed Lowe farms in Jackson Township to observe strip cropping, and at the Roy Utter farm to observe a farm pond.

Seven fertilizer demonstrations were set up during the year. Three on small grain were on the Carl Cummings farm in Jackson Township, Norman Hall and Roscoe Ormiston farms in Bear Creek Township. In these demonstrations nitrogen, phosphate, and a complete mixed fertilizer were applied. They were used as observation demonstrations and no yields were taken. Soil tests were made before fertilizer was applied. Only one demonstration showed any visual effects of the fertilizer during the season. In this demonstration, there was a definite response to nitrogen during the early part of the season. It is expected that a noticeable difference will occur on legume growth in the spring of 1951.

There were four fertilizer demonstrations established on corn; on the Clifford Bryan farm in Jackson Township, Bruce Ostrom farm in Jefferson Township, A. D. Hopwood farm in Deep River Township, and Art DeVilder farm in Bear Creek Township. Only one of the demonstrations showed much response to fertilizer application. On one of these plots the row application of fertilizer showed more growth and a richer green color at the time of se-

cond cultivation. When the plots were harvested there appeared to be more moisture in the corn receiving nitrogen application, but there were no noticeable differences in yield.

A pasture demonstration was established on the George Dale farm in Lincoln Township. In the fall of 1949, the pasture was tilled with three tillage treatments—the use of a disk, plow, and spring-tooth cultivator. Various seed applications were made in the spring, crossways to the tillage plots with various varieties of grasses and legumes. Although the season was very dry, most of the grasses established themselves and it is expected that in 1951 some very worthwhile information will be secured from this plot.

FIELD OPERATIONS

PROGRESS IN DEVELOPMENT OF CONSERVATION PLANS

During 1950, 42 farmers were given technical assistance by the Soil Conservation Service in developing soil conservation plans comprising a total of 7,255 acres. Since the district was organized in 1945, 263 farms have been planned amounting to 45,988 acres.

Interest in soil conservation has increased over 1949. Farm planning has not kept pace with applications. During 1949, 40 farm plans were prepared. On January 1, 1950, 57 applications were ahead. In 1950, 42 farms were planned but 88 applications are now ahead.

All planning has been done on a group basis. To date, 29 groups have been organized for planning. Assistance has been given to 22 of these groups leaving 7 groups on the waiting list.

Follow-up With Older Cooperators—This is the first year a systematic effort has been made to contact cooperators with the older farm plans. This help was made possible indirectly by extra assistance provided by State funds. The district is concerned about the progress of older cooperators and desires to give needed assistance available.

During the year, 104 follow-up contacts were made which seemed to be appreciated. Help given, varied all the way from some minor changes in the cropping program to a complete overhauling of the plan. In many cases cooperators decided to apply more conservation practices when they knew they could still get technical help from the district.

The district is convinced of the worth of follow-up programs because interest has been revived and a general improvement in existing farm plans has been accomplished.

Application of Conservation Practices

Weather—The summer of 1950 will be remembered as one which was unusually cool and moderately dry, followed by a fall which was of normal temperature but even dryer. Drouth damage to crops was not severe because of the time of the dry period and because of the cool weather. More expense and inconvenience has been caused by the drouth due to the failure of numerous shallow wells.

The rainfall pattern over the county was spotted. Erosion damage varied from slight to very severe. In all areas extending east and west along the south side of Jefferson, Madison, Sheridan, and Chester Townships two very destructive storms occurred in June within an 8-day period. It is estimated that a total of 10 inches of rain fell in these two storms. Soil losses from sloping corn fields were tremendous. Contour farming helped but it was evident that more effective practices are needed to control soil losses in such storms.

Seedings of legumes and grasses were better than average with the exception of sweet clover which apparently was hurt by the sweet clover weevil. The cool summer which was a handicap to the corn crop was of benefit to grass stands. This is a favorable factor in the conservation picture for 1951. For the fourth successive year dry weather has made the establishing of seedings during late summer in preparing waterways impractical. Ordinarily, late summer is the best time to establish grassed waterways.

Promising Crops—Birdsfoot trefoil, ladino clover, and alta fescue have been grown in the district on a trial basis since 1947. Several farmers this year made field-size seeding of trefoil and ladino. In the case of the trefoil some of the seed has been of Italian origin and some of the domestic origin. It is too early yet to determine for sure how well trefoil will work out in permanent pastures. The trial established on the J. J. Boatman and George Wilson, Jr. farms give it considerable promise.

Ladino clover is gaining in favor. Even though it has been found to lack winter hardiness; easy seeding, excellent pasturing, and haying quantities have partly offset this fault. It has shown its ability to recover from thinned stands by numerous runners, and there are good prospects that hardier strains may develop or be developed as time goes on. Although the price per pound is high, one pound per acre has been found to give adequate stands where seeded in mixtures, as the practice generally is.

Alta fescue is still on trial. Reports are conflicting. Mr. George Wilson, Jr., who has a trial planting made in 1947, is satisfied with its pasturing qualities providing the growth is kept from becoming rank by clipping. It is quite drouth hardy. Other reports are that alta fescue tends to be harsh and unpalatable and much of the time livestock do not eat it readily. Further trials are being made with it around ponds, in waterways, and in livestock lanes, where high palatability is a disadvantage.

Multiflora Rose Plantings—Multiflora rose is a hardy, easily-grown shrub, 6-8 feet high which is being used in various parts of the United States as a living fence and cover for wildlife. At present it is not known for certain how far north it is adapted. It is thought it is suited to at least the south half of Iowa.

In 1948, a few thousand roses were planted in Poweshiek County on a trial basis. From these there is no indication that they lack winter hardiness. In 1950, plantings were expanded to over 40,000. Planting stock was obtained through the Iowa Conservation Commission at a very reasonable cost. Also, some plants were secured from private nurseries and from the Soil Conservation Service. These 1950 plants survived well and made

excellent growth. At the 1950 rate of growth, Poweshiek County will have miles of multiflora rose fences on farms in the very near future.

Seed Production—Brome Grass—For the first time since the Lincoln and Fischer strains of brome grass were introduced into the county, the supply of home-grown seed appeared to be equal to demand. Stimulated by high prices in 1949 and 1950, more fields were saved for seed. Good acreage and good yield have combined to produce a good supply of home-grown seed.

Grassed Waterways—Establishment of good grass waterways is the first and one of the most essential steps in installing a complete conservation program. Successful contouring, strip cropping, terracing, and diversions depend on adequate waterways to dispose of excess runoff.

Shaping and seeding of waterways in the spring has made good progress but August and September work has been pretty generally impractical due to dry weather. The year 1950 was the fourth successive dry fall, making it almost impossible to establish satisfactory grasses in waterway channels.

Reed canary, although probably the best waterway grass we have, is an uncertain seeder with a high seed cost. This has limited its use greatly. To partly avoid these disadvantages, seeding of small patches (sod banks) to supply sod has been advocated. This project has made some progress.

The experience of George Norden of Guernsey, and Lauren Wright of Montezuma, indicate that the most successful method of establishing reed canary sod banks is seeding about mid-August on good soil that has been summer fallowed for three or four weeks.

Strip Cropping—Strip cropping in some form has been used as a control measure on about half the farms planned. Where terraces are feasible and acceptable to the cooperator, they will accomplish a higher degree of control and permit a simpler system of rotation pasturing. Rotation pasturing, however, can be arranged on strip cropped fields if a long rotation is used.

Terraces and Diversions—Construction of terraces and diversions made good progress in the spring due to favorable weather, and poor progress in the summer and fall due to dry weather. More diversions than terraces have been constructed. Diversions built before the large rains in June effectively demonstrated their usfulness in reducing erosion.

Ponds and Structures—Seven ponds were stocked with bass and bluegills in August. Twenty new ponds were constructed, which is an increase of 400 per cent over 1949. The increased interest in farm pond construction is due primarily to failure of shallow wells and a need of livestock water supply.

Several ponds stocked with bass and bluegills were available for fishing for the first time in 1950. Good fishing has been reported.

One large gully control structure was completed on the Harley Reimer farm. The engineering was done by the Soil Conserva-

tion Service, the earth work by private contractor, and the concrete work by Mr. Reimers himself. This is one of the largest gully control structures in East Central Iowa. The structure controls run-off from 345 acres and forms a lake of approximately 5 acres above the earth fill.

Activities Made Possible By State Funds

From funds made available by the State of Iowa, approximately 15 man-months of technical help was hired. This enabled the District to facilitate progress of conservation in the following ways:

1. Follow-up on old plans. The district has at present 263 farm plans, several of which were written in the fall of 1945. Some of these cooperators have not been contacted since 1945 and -46. The addition of state help has relieved one of the Soil Conservation Service regular staff members, Archie Casebolt, permitting him to spend time checking the status of these older plans. Help given varied from a few minor changes in the cropping program to complete reworking of the farm plan. Mr. Casebolt has made 104 follow-up contacts in 1950.

2. Help to groups organized but not planned. The district has on file 88 applications from farmers who are waiting for farm planning assistance. It is the desire of the district to give these farmers help with simple soil conservation practices until they can be assisted in developing complete soil conservation plans. The employment of state aids have helped materially in making this possible.

3. Publicity and information. Assistance and funds provided by the state enabled the district to write numerous news stories and to take many pictures which will have value in the future as well as the present The district entered a float in the Brooklyn Centennial Parade which received much favorable comment. Without state aid and funds, this could not have been done with the same degree of success.

4. In cooperation with the Iowa Conservation Commission the district helped process papers and supervised planting of over 40,000 multiflora rose for living fences. This project was facilitated much by state assistance.

PROBLEMS AND OUTLOOK

The dry weather in the late summer and throughout the fall of 1950 affected the crop yields. There were few rains during the year that caused serious erosion so that the net result is that erosion was not a great hazard that it normally is, but the dry weather may have serious results. Up to the time of the writing of this report, the snow fall has been light.

The above lack of rainfall increased the interest in farm ponds and created a water shortage problem for livestock. This also applies to other uses for water such as municipal supplies at Montezuma.

We expect that the war activity may bring a repitition of the demand we had for increased production during the last war. The lifting of crop restriction would indicate this. We hope that this expected increase will not affect the carrying on of good crop rotations too seriously. As a matter of fact, many fields have not recovered from the "beating" they took during the last war.

Insect damage, particularly from corn borer was not as serious in 1950 as was expected. However, we can not relax our efforts at control because there are still plenty pests on hand.

In considering progress made, it is interesting to note the increased knowledge and concern by many people of our soil resources. Even as recent as ten years ago, there were many who thought that soil fertility was inexhaustible and was no particular problem. However, the increase of general knowledge of soils, fertilizers, erosion, and control measures; the importance of proper rotations; and the balancing of livestock for the capability of the farm, is most encouraging. There are very few people who do not have some conception of what soil and water conservation is. The term "grass land farming" is beginning to come more into prominence and should be beneficial in assisting to shift some of the interest away from the improper and soil depleting rotations.

There are several conservation practices which still are not being used as rapidly as they should be. More terraces should be built each year because of the high effectiveness in erosion control. The dry weather of last fall, of course, slowed terracing down. Lack of proper outlets is another reason, which in turn means more emphasis on grassed waterways. More pasture improvement should be carried on.

As mentioned earlier, State Appropriations have been of material assistance and we plan to again use these to good advantage in 1951. Our concern, in connection with this, is that we may have difficulty in employing qualified persons for this part-time assistance. The district has been allotted $500 each of the two fiscal years running from July 1, 1949, to June 30, 1951. We used in the 1950 calendar year $403.72. Also, we shared in a $200,000 allocation throughout Iowa each of the two years and we used in 1950, $395.70 for purchase of equipment and $2712.57 for clerical and technical assistance.

SUMMARY

The program has contributed very materially to the welfare of the soils of Poweshiek County, by helping to place the soil in a better condition as an asset to the nation, in the National Defense Program.

The demands indicated by the National Defense Program, without any doubt, are more likely to be achieved for having had a conservation program for the last five years.

Form SCD-14
(Rev. 12-10-42)

Soil Conservation District

Sheet 1 of 1

ANNUAL REPORT OF CONSERVATION PRACTICES

DISTRICT Poweshiek County (Name) Brooklyn (Hdqtrs.Dist.Gov.Body) Iowa (State)

Period Jan. 1, 1950 to Dec. 31 1950

Agreements Signed:	This Year	To Date	Amendments:	This Year	To Date	Agreements Cancelled:	To Date
Number:	42	263	Number:			Number:	27
Acres:	7253	45988				Acres:	3928

PRACTICE	Unit	BEFORE AGREEMENT This Year	BEFORE AGREEMENT To Date	NEWLY PLANNED This Year	NEWLY PLANNED To Date	ESTABLISHED This Year	ESTABLISHED To Date
Contouring	Acres			3766	21102	1485	14556
Strip Cropping	Acres			481	6365	108	4192
Pasture Improvement	Acres			808	6114		5570
Seeding of Pasture	Acres				5570		5570
Wildlife Area Improvement	Acres			4	13		
Woodland Management	Acres				40		
Tree Planting	Acres			6	11		5
Farm Ponds	No.			18	43	16	33
Terraces	Miles			19.9	404.5	.5	38.6
Field Diversions	Miles			17.4	34.2	2.8	8.0
Farm Drainage	Acres			60	815	28	220
Closed Drains	L.Ft.			44500	241793	14980	123635
Open Drains	Miles			.35	.5		
Waterways	Miles			44.5	226.9	6.0	169.33
Structure	No.				18		2
Fence Row Management	Miles			3.89	11.3	5.8	5.8
Field Boundaries	Rds.			8752	9799	200	200