

ANNUAL REPORT

POWESHIEK COUNTY SOIL CONSERVATION DISTRICT

The Commissioners of the Poweshiek County
Soils Conservation District wish to present to
the farmers, all cooperating groups, and others
in the county interested in soils conservation
this report of the progress of the district for
the year 1948 and the outlook for 1949.

ANNUAL REPORT - 1948

POWESHIEK COUNTY SOIL CONSERVATION DISTRICT

The Poweshiek County Soil Conservation District has now completed its third year of work. Its success has been brought about by the acceptance of the responsibilities of leadership by a large number of people. Some have acted as leaders of neighborhood groups; some have taken active part in our Field Day; others have cooperated with us through different groups within the county. These people have helped us carry out the work as planned by the county commissioners with the capable assistance of our county technicians.

Some of the work of the year has been to:

1. Stress the need of starting now to conserve our soil and water for ourselves as well as the future generations.
2. Show that conservation need not be difficult, and that much can be done with regular farm machinery, as was demonstrated at the County Field Day.

It is a pleasure to see the real progress that soil conservation has made in Poweshiek County. Numerous farms have adopted contouring practices, built terraces, and are growing improved grasses on their pastures. A few have built farm ponds as a water supply. Several have established fences of multiflora roses. The three latter conservation measures greatly improve the environment for wildlife, thus linking more closely the wildlife conservation program with that of soil conservation.

We have groups in most of the townships with cooperators in all but one township. We hope to close the gaps rapidly as others see the advantages to those who are cooperating.

Your district has had as commissioners, Elmer Dunnick; J. J. Boatman; Howard Sears; with Morton James, County Technician and Archie Casebolt helping the latter part of the year as technician's aid. Lyall Mitchell, District Conservationist, has given valuable assistance; also Bryan Boatman of the Soils Service, who helped in the rush season of the spring. L. D. Brown of the Extension Service has served as secretary of the Poweshiek County Soil Conservation District and has given valuable assistance.

EDUCATIONAL PROGRAM

In the cooperative agreement with the Soil Conservation Service and the Soil Conservation District the Extension Service is responsible for the educational program. The county extension director served as secretary to the county soil conservation commissioners and as representative of the Extension Service, directed the educational work.

From the beginning of the Soil Conservation District Program in Poweshiek County, the commissioners recognized the importance of developing the program around local groups. It was realized that individual work was very slow and

that more could be accomplished through group effort. When a group of farmers in a community are desirous of securing the assistance of the Soil Conservation District, a meeting is arranged for at which time the program is discussed with those attending. If there is enough interest to warrant organization of a group, plans are made for such a group, a leader selected, and request for help signed. This request is then presented to the commissioners of the Soil Conservation District, who in turn act upon it and place a priority on the request as far as work and help of the soil technician is concerned. Soils technicians then develop farm plans with the group in the order that they were organized. At these interest meetings, a representative of the Soil Conservation Service, one of the soil commissioners and the county extension director discuss the work of the soils groups. During the year the Lester King group was organized in Scott Township. Plans are under way to organize a group in Bear Creek Township.

In past years it has been the practice to hold a series of contour demonstrations during the spring. This year the County AAA designated one farmer in each township to assist farmers with contour layouts if needed. It was felt that there was no necessity of holding contour demonstrations as in previous years. In order that the AAA representative in each township would be properly instructed on contour layouts, a county-wide meeting was held in the month of March with representatives of the Soil Conservation Service and the county extension director giving instruction on proper method laying out contours. The meeting consisted of talks on soil conservation problems in the forenoon and a field demonstration in the afternoon, at which time each of the AAA representatives were given an opportunity to run a contour line.

A very successful Soil Conservation and Land Use Field Day was held on the Harry Ryan farm in Sheridan Township, Wednesday, September 8, 1948. It was estimated that 500 people attended this meeting. This event was sponsored jointly by the Soil Conservation District and the Extension Service and had as its chairman, Howard Sears. J. J. Boatman was in charge of the plowing contest. Elmer Dunnick was chairman of the terracing demonstration; Albert Plesek Chairman of grassed waterway demonstration and Morton James supervised the tiling demonstration. The event included construction of grassed waterway with regular farm equipment and seeding and mulching of the waterway; terracing demonstration consisting of building a terrace with a farm plow, and a tiling demonstration taking place in low land adjoining the field area on land which had never been farmed. The contour plowing contest had four participants. The contest was won by David Anthony of Sheridan Township with Robert Dee, Madison Township placing 2nd; Gerald Bell, Sheridan Township, 3rd; and Dean Bowers, Malcom Township, 4th. Following is score card for this contest:

	Opening Furrow	Contour Adherence	Furrow Con- formation	Tillage Quality	Trash Cover- age	Water- ways	Land Ends	Closing Furrow
Anthony	10 $\frac{1}{2}$	9	15 $\frac{1}{2}$	11	8 $\frac{3}{4}$	16	4 $\frac{3}{4}$	4 $\frac{3}{4}$
Bell	11 $\frac{1}{2}$	8 $\frac{3}{4}$	15 $\frac{1}{2}$	10	9	18	4	$\frac{1}{2}$
Dee	13 $\frac{1}{2}$	9 $\frac{1}{4}$	15	10	8 $\frac{1}{4}$	14	4 $\frac{1}{2}$	4
Bowers	11 $\frac{1}{2}$	8 $\frac{1}{2}$	15 $\frac{1}{2}$	10	9 $\frac{3}{8}$	13	2 $\frac{1}{4}$	3 $\frac{1}{4}$
TOTALS -	Anthony -	81 $\frac{1}{4}$	Bell -	77 $\frac{1}{4}$	Dee -	78 $\frac{1}{2}$	Bowers -	73 $\frac{3}{8}$

Prizes for the contest were donated by six banks in the county in the amount of \$10.00 each and corn was donated by the various seed corn companies in the county. Equipment for the event was furnished by nearby farmers.

According to the 1947 farm census report, Poweshiek County farmers applied 1297 tons of commercial fertilizers. This was increased considerably in 1948. There is still a need for education in the use of commercial fertilizers and it is planned to hold a series of meetings the coming year on "Suggestions for Use of Commercial Fertilizers."

An effort will be made during the next year to organize new groups in areas not yet reached by the district program. It has been the feeling that groups should not be organized too far ahead of the time they will be reached by the work program, as their interest is greatest at the time of organization. As it is impossible to reach every farmer with a definite soils program, a soils group in each community will serve as both method and result demonstrations.

FIELD OPERATIONS

Progress in Development of Conservation Plans:

Since the beginning of the district, 21 groups have been organized. Planning work is almost complete on 15, leaving 6 groups ahead or something under 100 farms waiting for technical assistance. With the present staff, from one to two years will be required to take care of applications on file at present.

To date a total of 181 farms amounting to 31,493 acres has been planned. During 1948, 30 farmers were assisted in developing conservation plans, comprising a total of 5,195 acres. The rate of progress has slackened from previous years due to shortage of technical personnel and to more time being required for application.

Interest among farmers in developing conservation plans remains good with a high percentage of those attending group meetings developing conservation plans.

Application of Conservation Practices:

Weather - One of the most important factors influencing conservation practices is the weather. In 1948 the weather was both good and bad. It was bad in February. Late in the month with four or five inches of soupy, thawed top soil, a rain came that caused sheet and gully erosion seldom equalled in summer storms. Then following this erosion, the weather was good. In most of the county, at least, no rains occurred during the entire crop season that could be considered severely destructive. Rarely in the spring has there been such an opportunity for establishing sod in grass waterways without washing rains. Unfortunately, few took the chance because ordinarily spring is a poor time to start waterways. In August and September the weather was too dry for satisfactory establishment of waterways.

The most serious casualty of the freakish or unusual weather was the widespread loss of grass seedings with the resulting disruption of rotation schedules. The seriousness is further emphasized when the high war time corn acreages and winter killing of the 1947 grass seedings are considered; and due to a dry August and September it was rather useless to attempt fall seedings. This situation will carry over into 1949, presenting a difficult conservation problem. Red clover and timothy have been more susceptible to drouth and winter killing than has alfalfa and brome.

Results of Field Trials - An evaluation of trials of birdsfoot trefoil and ladino clover on the Geo. Wilson and J. J. Boatman farms indicates that birdsfoot trefoil gives the greatest promise of value. The ladino clover was almost entirely destroyed by winter killing. On the other hand, birdsfoot has made a steady improvement and looked very good in the heat of July. It appears that it is well adapted to the kind of land that needs to be in permanent pasture or permanent hay. In view of these observations, a district sponsored program might be initiated to encourage farmers to become producers of birdsfoot trefoil seed.

Multiflora Rose Plantings - Multiflora rose plants were secured in 1948 for trial planting on several cooperating farms. The ultimate purpose was for living contour fences. How well they will serve this purpose will have to wait for time. Unfortunately very few plants survived, probably due to weak planting stock and to unfavorable weather.

Fischer Brome Seed Increase Program - The first returns from the District's Fischer Brome seed increase program will be available for re-issue to new cooperators. Russell Winburn has turned back to the District approximately 200 pounds of certified Fischer brome. Harold McLennan will have approximately 100 pounds.

Grassed Waterways - Establishment of grass waterways remains one of the principal bottlenecks in installing a complete conservation program on farms. Successful contouring, strip cropping, terracing and diversions depend on adequate waterways. Even in the groups organized but not planned, considerable emphasis could well be made to start the program of seeding waterways.

Although the weather is the most important factor in successful waterway establishment, more emphasis could be placed on the use of brome and reed canary grass. Reed canary, without doubt, is the stronger of the two, but it still presents a difficult problem in establishment. If a "sod bank" (1/10 to 1/2 acre) could be started on every farm, sod would be available to establish stands in waterways, reliably and at low cost. A campaign to get reed canary sod banks on every farm would be a big step toward control of cropland ditches. Brome grass seeding has been reasonably successful.

Strip Cropping - Strip cropping in some form has been used as a control measure on about half of 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. Even though less simple, rotation pasturing can be arranged on strip cropped fields if a long rotation is used.

Terracing - Progress of terracing in the spring was better than anticipated due to favorable weather and slower than expected in the summer due to dry weather. Terracing on many farms is being held up for lack of suitable waterways.

Ponds and Structures - Ponds were constructed on five farms during the past season. Three were stocked with fish. Inspection of the Roy Utter pond which was stocked with bass and bluegills in September 1947, has shown the bass to have grown from 2-3 inches in length to 8 inches or more in length in twelve months.

Two structures were built during the year. These were on the M. F. Farmer and Albert Voelkel farms. The first was built by contractor Kirkpatrick of Oskaloosa and the second by the cooperator himself. Both were constructed according to Soil Conservation Service specification developed by Dillman Moorheart, the work group engineer. There is a keen demand for technical help in the planning erosion control structures. Several applicants are on file for such help. Lack of manpower has seriously hampered progress. Dillman Moorheart of Newton, who is in charge of a sizeable area, has been handicapped by lack of an aide much of the season.

It might also be said there is need of qualified contractors who will do this sort of work once the plans are made.

Tiling - There has been a lot of tile laid during the past season -- some by hand, some by large machines, some by Jeep outfits, and some with mole blind ditchers. It might be added too that the quality of some was good, some bad and some indifferent. The district office has made an attempt to give technical assistance to cooperators when requested. Not a lot was requested, but enough checking has been done to indicate that where tiling is done on flat land technical assistance should by all means be obtained -- before, to survey line and afterward, to check for adherence to survey. In this respect the district is in a position to give reliable, unbiased service.

Assistance Given to Groups Organized but Not Planned:

During February and March just prior to the spring layout season, meetings were held in all but a few of the organized groups. Since the number of organized groups has grown to 21 it is doubtful if this policy can be continued, even though it is beneficial.

With the planned group such meetings provide an opportunity of setting up a schedule of work or an assistance calendar, saving time for the technician as well as the farmer. With the unplanned groups the meetings serves to stimulate interest in doing things which can be done without technical assistance and in keeping the group together.

It is the policy of the District to make group applicants second in priority only to farmers having farm plans. In compliance with this policy several individuals have been helped with waterways, terraces, contouring, strip cropping, and seedings. As an example, Mr. George Norden, a member of the Harley J. Hillman group near Guernsey was assisted in the construction of approximately two miles of terraces in May.

PROBLEMS AND OUTLOOK

The wet spring and early summer of 1947 made it difficult to control weeds and in turn made an unfavorable attitude by many farmers toward contouring. No particular difficulty was experienced in 1948 and additional control of weeds was secured by some through use of 2,4-D. Even though the use of chemical weed control is just getting a good start, it promises to eliminate some of the cultivation normally done for weed control.

Corn borer infestation may necessitate more fall plowing and a change in other cultural practices which are not favorable to erosion control. If it is necessary to turn under all trash, then that should be another reason why contouring and other conservation practices should be used to reduce soil loss.

Unfortunately, many meadows were killed out in the 1947-48 winter and affected crop rotation in two ways. Many of those fields were planted to corn which boosted the percentage of intertilled crops which in turn is too high already from a good soil management standpoint. The other result was that little legume seed was harvested and that will affect the amount of seeding to be done in 1949. Prices of seed are naturally high.

Again we can state that there will be a strong temptation to grow more acres of corn and beans than good rotation would permit due to high prices. The high yields of 1948 will influence many to plant large acreages to those crops again with the hope of a repeat performance on production. In stating this, we are not forgetting the need of the production of food, but we are also mindful of the fact that there is a limit to where our soil resources can be driven without deteriorating very rapidly.

Large gullies present major problems. The first is that of convincing the owner that because it is a major problem, it requires a major job of control. After that is done, considerable work is involved in making the surveys and preparing the engineering plan and the third obstacle is getting someone to build the structure. Such gullies which drain large areas cannot be controlled with less than permanent type structures.

Grasshopper infestation was somewhat of a problem this past year and caused some damage to both growing crops as well as fall seedings. The commissioners feel that farmers should not wait quite as long before starting to spray to control grasshoppers. They believe quite a few seedings were lost because of the grasshoppers. It may be that grasshopper damage may not occur more often than once in several years.

Most of the items listed so far are problems. Credit should be given to the general outlook for soil conservation in the future. It is very encouraging to note the great number of people who are indicating interest in the subject. This includes not only those directly concerned such as the farmer and commissioners, but also the newspaper men, the merchants, bankers and teachers. Then, too, organizations as the Chamber of Commerce, machinery dealers and various associations. When so many people become concerned about a problem, there is bound to be progress made.

CONCLUSION

In conclusion, the Commissioners of the Poweshiek County Soil Conservation District wish to voice their appreciation to everyone who has participated or assisted during the past year. This will include the Extension Service, The Soil Conservation Service, the Production Marketing Administration, the newspapers, the schools, the Bankers' Association, the various planning groups, the machinery dealers, and any others who have not been listed.

DATE: February 16, 1949

POWESHIEK COUNTY DISTRICT COMMISSIONERS

Howard Sears

Howard Sears, Chairman

Elmer Dunnick

Elmer Dunnick

J. J. Bostman

J. J. Bostman