

HISTORY 1918 to 1944
WEST POTTAWATTAMIE SOIL PROGRAM DEVELOPMENT

Soil and water conservation and efficient crop production, through use of improved varieties and the best soil practices have been part of the Extension Service since its beginning in 1917. One of the first programs which was during World War I was to help farmers to grow two blades of grass where one grew before.

Actual soil erosion control methods were first started in about 1927 when nine soil erosion demonstrations were conducted in the county. These were mainly wire dams and ditch dams of different types.

Through the years of 1920 to 1930 main soil activities included soil testing, fertilizers, test plots, soils fertility meetings, crop rotation, weed eradication, and ditch dams.

1930 to 1933 marked the period of time when farmers became more aware of soil moisture losses and the program included surveys of needs for special soils work. Visits were made to Clarinda Experiment Station and other counties.

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1934 to 1936, gully control by tree planting, proper soil management and further surveys were made by the County Extension Service.

1937, four farms in Hardin township were selected as extension demonstration farms to show the value of erosion control methods. The next year these farms included demonstrations on contouring, terraces, brome grass seeding, and others.

In 1939 there was a big drive for contouring. Agricultural engineers from the Extension Service assisted with laying out contours with the walking A. Thirty-two men attended the first demonstration and eleven of them contoured that year.

In 1940 a CCC Camp was established in Oakland. The service of their technical personnel and the camp boys was made available to thirteen demonstration farms in West Pottawattamie.

In 1941 a special soils committee was appointed by the County Farm Bureau to assist in enlarging the soils program. Fertilizer demonstrations were started on two farms. Thirteen farms were under CCC Soil Conservation Agreements, with four under Extension Demonstrations. 5.2 miles of terraces had been constructed. Much contouring was being practiced.

In 1942 contour demonstrations were held in each township; development of a soils district was being encouraged by AAA and Farm Bureau. A series of educational soils meetings were conducted. About 35% of the farmers were using some improved soil practices.

Last year, 1943, farmers were demanding more technical assistance on soils problems, so the soils districts program was encouraged. Petitions were submitted, a hearing was held and the referendum taken with the result that a soils district was approved March 3, 1944. By 1943, 9 miles of terraces had been constructed, five terrace and three contour demonstrations were held. Approximately 55% of the farmers have adopted some of the soil erosion control and moisture conservation practices.

DESCRIPTION OF DISTRICT

The West Pottawattamie County Soil Conservation District was organized in an endeavor to assist and encourage the establishment of sound soil conservation on land included in the district. The District is adjacent to the Missouri River on the west and the third county north of the Missouri-Iowa line and includes all of the area within the boundaries of West Pottawattamie County, Iowa exclusive of incorporated cities and town.

West Pottawattamie is chiefly an agricultural area. Grain and livestock production have always characterized the agriculture of the county. Except for Council Bluffs which is in the southwest corner with a population of 42,000, the towns have

an approximate population of 1,000 or under. Marketing transportation is adequate. Grain crops and livestock feeding have required intensive cultivation of the soil. The farm crops of the County are mainly corn, oats, wheat, hay and pasture. The livestock enterprise of the county consists of commercial cattle feeding, hogs, dairying and poultry. Severe sheet erosion accompanied by serious to excessive gullying has taken place with very little if any top soil remaining on the cultivated rolling land. The excessive sheet and gully erosion on the upland has caused serious siltation and flood damage to crops and other property on the bottom land.

A. Four Major Problems Areas in the County

The district has been divided into four major problem areas, based on soils types, erosion and topography. A description of the areas are as follows:

1. Missouri River bottomland -- This area will consist largely of sweet bottom land soil varying in texture from clays to sands. Heavy clay soils are poorly drained and sandy soils are excessively drained. This area comprises approximately 16% of the area of the district.
2. The Bluff Area -- This area consists of the very steep section, adjacent to Missouri River bottom, a large part of which is catsteps. The soils of this area consists of coarse textured to medium textured soils and sweet.
3. The Steeply Rolling Upland -- This area consists of coarse textured to medium textured soils, to sweet gently rolling to rolling, with ridge tops which are quite narrow. This area comprises approximately 40% of the area of the district.
4. Moderately Rolling Upland -- This area consists of the medium textured soils, neutral to sweet, gently rolling to rolling with ridge tops which are quite broad. This area comprises approximately 36% of the area of the District.

B. Specific Problems in Major Problem Areas

1. Missouri River Bottomland

- a. Inadequate drainage
- b. Siltation and floods
- c. Overflow due to Missouri River topping its banks
- d. Excessive taxation and special assessments due to frequent dredgings, construction of revetments, levees, etc. make a serious financial problem.
- e. Adaptable crops for the various soil types
- f. The burning of crop residues and poor cropping systems are resulting in a loss of organic matter, a reduction of fertility, and a deterioration in the physical structure of the soils.

2. Bluff Area

- a. Gullying and sheet erosion
- b. Lack of vegetative cover
- c. Silt deposition from this area deposited on bottomland
- d. Gully and sheet erosion in connection with vineyards and fruit growers

3. Steeply Rolling Upland

- a. Serious sheet and gully erosion as a result of improper land use.
- b. Lack of permanent vegetation and proper crop rotations on this land
- c. Siltation at the bottom of the slopes
- d. Lack of adoption of practices which would hold soil and moisture up on the slopes
- e. Serious gully problem

C. General Problems

1. Lack of realization as to the seriousness of erosion losses
2. Lack of information on means of correcting losses
3. Unsatisfactory tenancy situation for best conservation
 - a. Two families living off one farm
 - b. Short term, crop-share leases -- no provision for proper land use and conservation practices
 - c. No reimbursing feature for work performed in conservation and improvements for which tenant has not received value before moving
 - d. Small operating units
4. Lack of trained assistance in farm conservation planning and application
5. To meet the increased demand for All-Out-Food Production with a minimum of soil waste

OBJECTIVES OF THE SOIL CONSERVATION DISTRICT

- A. To correct in so far as possible the specific problems as follows:
1. Missouri River Bottom
 - a. Proper levee construction
 - b. Retardation of silt on upland to prevent drainage ditches resulting in frequent clean-outs
 - c. Desettling basins
 - d. Introduction of more legumes into bottomland rotation to increase production, soil friability and lessen weed problems
 - e. Help plan proper drainage
 - f. Discourage burning of crop residue

2. Bluff Area

- a. Encourage and assist in the establishment of permanent vegetation and its proper grazing management once established
- b. Encourage and assist in the establishment and improvement of woodland and wildlife areas
- c. Work closely with grape and fruit growers and their association in regard to maintaining or improving physical conditions of soil and prevention of gullies
- d. Encourage and assist in the renovation of pasture areas
- e. Encourage and assist individuals or public in gully control through engineering structures where needed
- f. Discourage the burning of crop residue
- g. Larger operating units with grass land economy

3. Steepland and Moderately Rolling Areas

- a. Encourage and assist in the planning for proper land use through:
 - (1) Use of longer rotations which include legume and grass mixtures
 - (2) Use of adapted crops
 - (3) Establishment of grassed waterways
 - (4) Adoption of necessary supporting conservation practices such as contouring, terracing, buffer strips
 - (5) Establishment and maintenance of woodland and wildlife areas
 - (6) Plan and establishment of gully control such as engineering structures
 - (7) Prevention of siltation of streams and of floods through above practices
 - (8) Abolish the practices of burning crop residues
 - (9) Application of fertilizers and limestone where needed
 - (10) Eradication of noxious weeds
 - (11) Adjusting crop and livestock programs to fit the physical resources and farm business

(12) To secure group action in assisting farmers in the development and application of farm conservation plans

(13) To help in establishing on the farms the number, types and quality of livestock adapted to the feed grown on farms under a soil conservation program

B. To conduct a conservation education program by:

1. Method demonstrations for contouring and terracing
2. Meetings carried on through existing organizations
3. Soil Conservation courses in public schools
4. Adult agricultural schools and adult forums
5. Newspapers -- feature stories
6. Bringing about a realization of the seriousness of erosion losses
7. Tours
8. Observation and demonstrations
9. Motion and other pictures
10. Using the services of farmers following conservation practices
11. Provide the people of the District with information necessary for them to establish soil conservation practices
12. Provide assistance to groups and individuals to put conservation practices into effect
13. Investigate, own, inquire, recommend for purchase by other agencies or develop sub-agricultural lands

C. Adequate agricultural incomes based on proper land use which will:

1. Support a high standard of community life
2. Support a high standard of farm family living

D. Improve the farm tenacy situation by:

1. Bring about closer relationship between owners and tenants
2. More owner operated farms
3. Encouraging more desirable lease arrangements

E. Secure cooperation and support of landowners, operators, highway groups, organizations and of local, state, and federal agencies in carrying out a sound soil and moisture conservation program.

F. Conclusion

The Commissioners acknowledge the cooperation and assistance of all agencies and individuals who have assisted with the preparation of this Program.

West Pottawattamie County Soil
Conservation District

Ernest Harms, Chairman, Dist. Commissioners

The signing of this District Program was authorized by a resolution of the District Commissioners adopted at a meeting held on April 22, 1944.

SUMMARY

The West Pottawattamie County Soil Conservation District was also responsible for the publishment of a Land Use Guide for Council Bluffs. This guide employs a different angle in reaching the public. It's been distributed throughout the businesses in Council Bluffs and since then has received National recognition in many states. The guide shows illustrations of where little attention was paid to conservation, when building homes. Now questions are being asked before work begins, making urban development a little more acceptable. It has enabled the district to new opportunities; to be of service to the public.

The District has been getting good cooperation with other groups. Some of this is mentioned in our outstanding achievements with the County Board of Supervisors. We also work in cooperation with the Environmental Education Council, The Resource Development Committee, the ASCS-County Committee, the Metro-Area Planning Agency and Riverfront Development Project.

Every year the Iowa Soil Conservation Achievement Awards Program sponsors a contest. The local winners are chosen by a committee from the Districts Governing Body. There are three division winners: 1) Owner operated or family operated farm. 2) Tenant operated farm. 3) New Cooperator within the last two years. The names of these winners are then submitted for the Regional Contest. This year the District provided a scholarship fund of \$59.00 for the Fall Teachers Workshop. The Workshop was held at Camp Hitchcock which is headquarters for a YMCA camp.

All other activities in the District have been attached with the Goodyear Contest form.

SUMMARY OF HIGHLIGHTS

The West Pottawattamie Soil Conservation District Commissioners feel that the most outstanding achievement accomplished this year would be the Districts ability to work with other organizations. For Example:

1. Pottawattamie County is in the process of re-writing their zoning ordinance and adding sub-division regulations. The District has been asked to review the proposed ordinance and sub-division regulations and make recommendations to the County Board of Supervisors. The proposed ordinance will be based on soil capabilities and before any change in ordinance is made or building permit issued, the District will be asked to review all plans and to make recommendations to the County as to soil limitations, and erosion control measures needed. It is anticipated these new regulations will be adopted in early 1975. The commissioners feel that with the adoption of these ordinances they can be of more service to the people in the district.
2. The Commissioners took the leadership in developing a Memorandum of Understanding between the nine (9) soil conservation districts in Southwest Iowa Region 13. This organization now has a seat on the Council of Officials of MAPA.
3. The Commissioners have continued their close relationship with Riverfront Development and MAPA. This close relationship has shown MAPA, Pottawattamie County and others that the District Program has something to offer to these organizations and the District has the expertise to furnish assistance in the soils related fields.