

SOIL and WATER



IOWA



Official Publication of the Iowa Association of Soil District Commissioners and the Iowa State Watersheds Association

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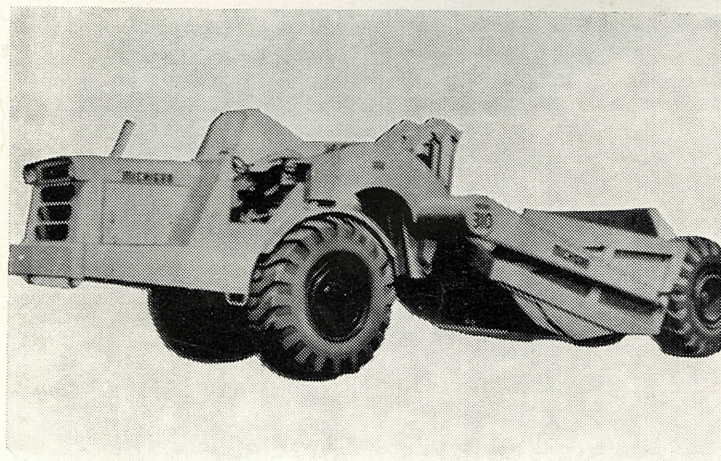
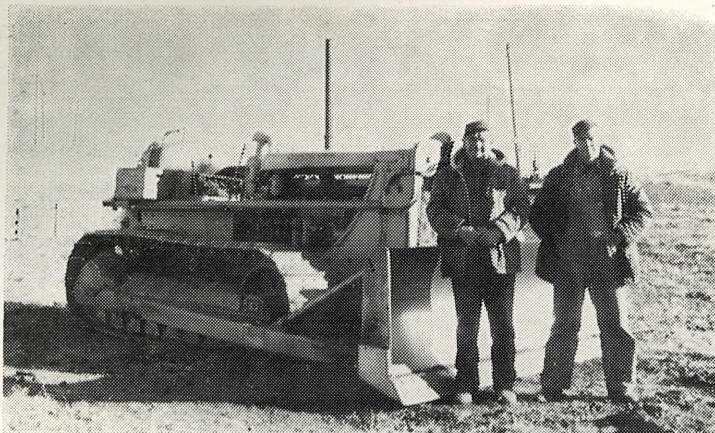


DECEMBER

1958

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Barr Keshlear, President, Iowa State Watershed Association, Shenandoah, Iowa
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Iowa Association of Soil District Commissioners, Publisher

Iowa Soil & Water is published jointly by the Iowa Association of Soil Conservation District Commissioners and the Iowa State Watershed Association as information for proper conservation of each acre of agricultural land within its capabilities. The publication supplies information for members of both groups and others interested in soil erosion control and flood prevention.

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Reddy Killowatt and all of us at IPS welcome this chance to salute the Iowa Soil and Water Conservationists for their commendable efforts in behalf of soil conservation. All wealth originates from the soil and our great heritage in Iowa is an abundance of rich, black earth. Let's all help to conserve this tremendously valuable resource for ourselves and future generations.

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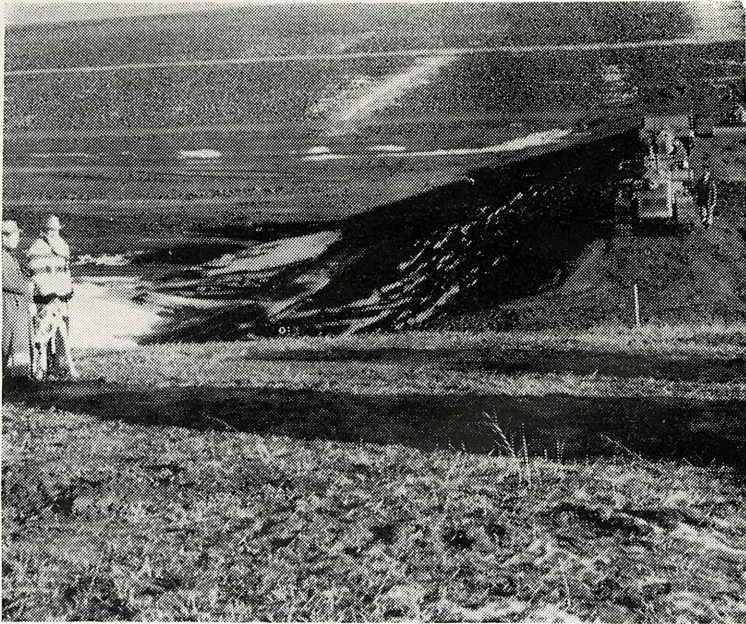
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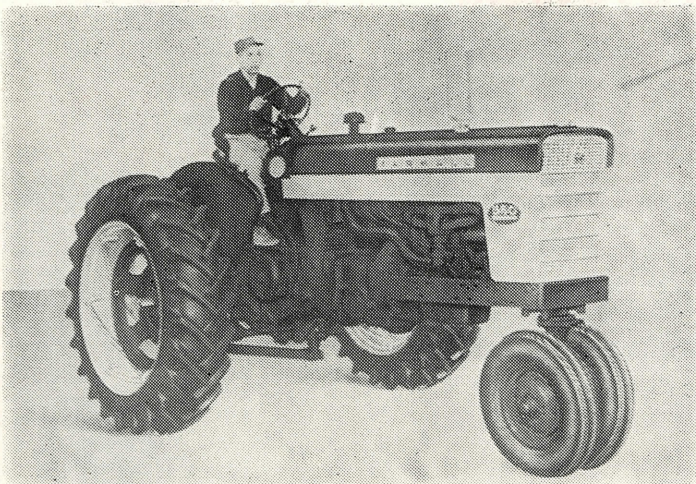
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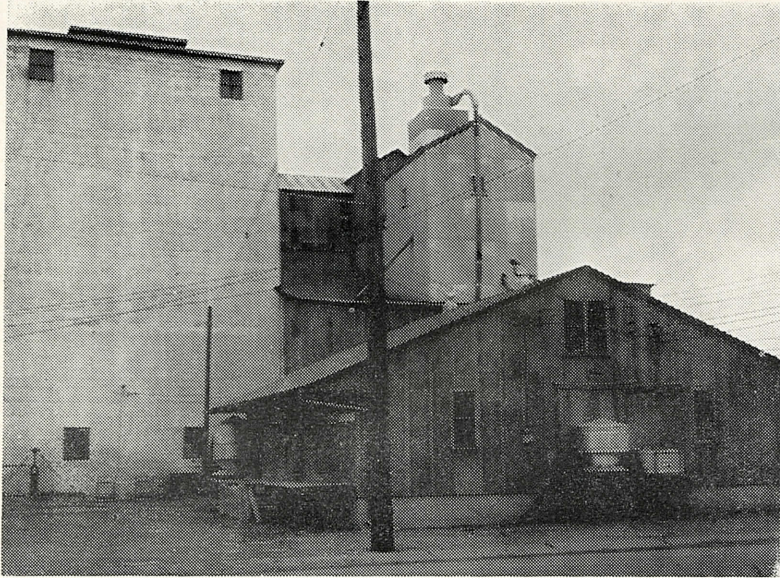
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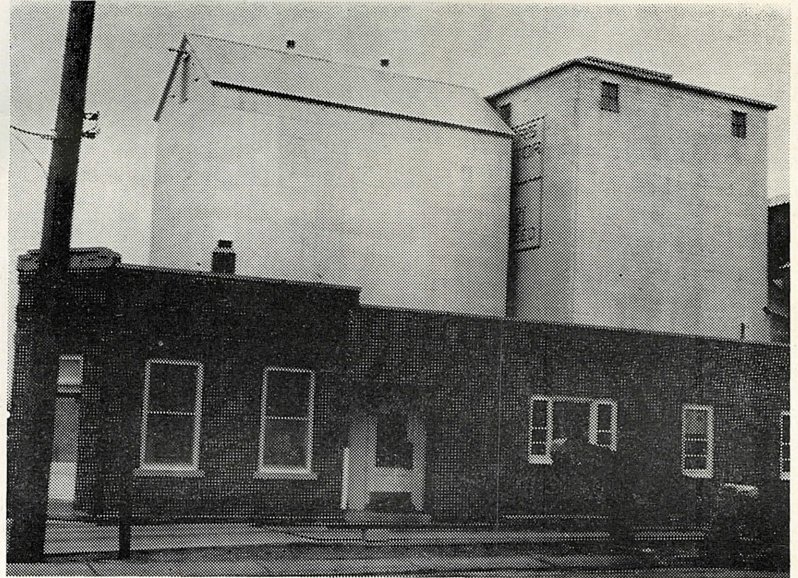
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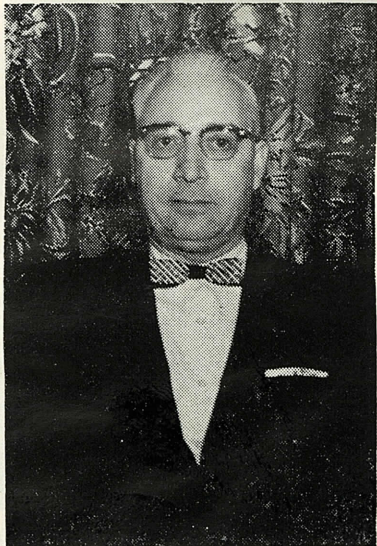
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President's Corner



By Gilbert Fridley
President I.A.S.C.D.C.

The regional meetings of the Association held in December were well attended and a fine discussion of policy, especially legislation and finances was had.

I again want to stress to District Commissioners to meet with your state senator and representative and explain your District work load and accomplishments; what state funds have accomplished in your local District; then present to them our askings from this legislature, requesting an increase in the 2A Budget to \$650,000 which is the actual amount needed for a state clerk and state aid in each District in Iowa.

This is the commission's responsibility and the State Association will carry on after your local contacts.

It is imperative that we get an increase in 2A funds from this legislature or our Conservation

—Continued on page 13



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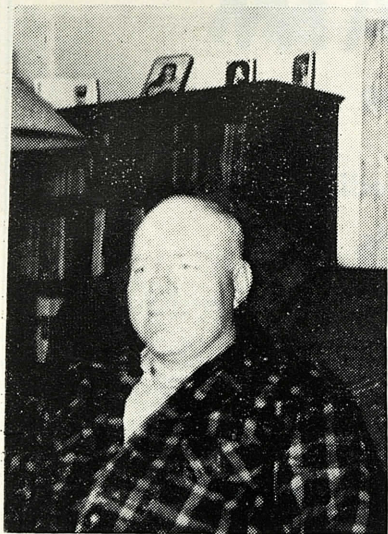
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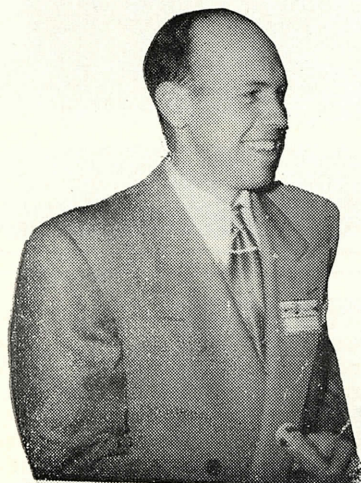
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PAST COMMISSIONERS



H. L. ELK

Past Commissioner (deceased)
Became a Commissioner in 1949 replacing Ed C. Perion. Farmed 240 acres in Galva and Silver Creek Township.



DAVID BRUECK
Past Commissioner

Filled out a part of Henry Dall's term until a regular election was held. Farmed 240 acres in Maple Township.



ED C. PERION
Past Commissioner

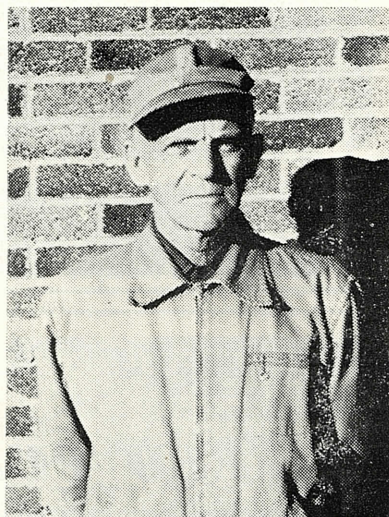
Served a four year term on the original board. Formerly farmed 240 acres in Corwin Township.



HENRY DALL

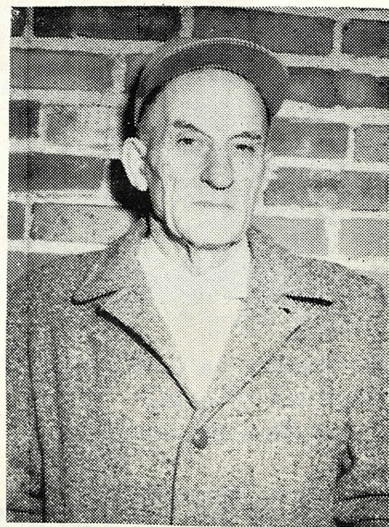
Past Commissioner (deceased)

Served seven years on the original board. Formerly farmed 210 acres in Maple Township.



ROSS BAUMANN
Past Commissioner

Baumann replaced J. B. Scott and served a six year term. Formerly farmed 100 acres in Battle Township.



J. B. SCOTT

Past Commissioner

Served a two year term on the original board. Owns 160 acres in Garfield Township.

DISTRICT TREASURER



RAY BRESNAHAN
Treasurer

Ida Soil Conservation District

Ray, his wife, Hilda, and children, six boys and three daughters, own and operate a 200-acre farm in Corwin Township. He has been a cooperater in the District since 1946, has a five-year crop rotation, few terraces, contour farming, waterways, and a large gully control structure.

Ray is a Township Trustee, a member of the American Legion, has been active in ASC work, and is a member of the Sacred Heart Catholic Church.

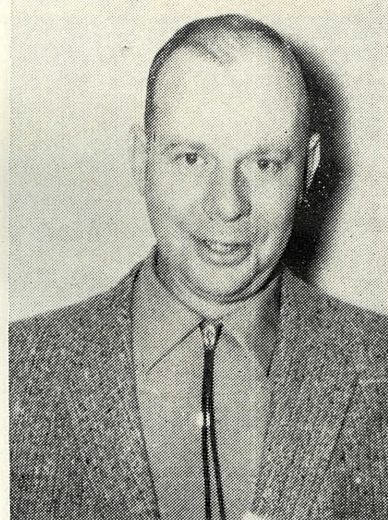
FUNDS AVAILABLE FOR DISTRICT ASSISTANCE

By Gladys Thornhill
State Clerk

The Ida County Soil Conservation District has several sources of financial assistance, these include funds provided by both the State of Iowa and the Federal Government. Funds provided for by the State of Iowa are the 1-A Budget Fund which is used for office supplies, postage stamps, printing, mileage, and expenses for District Commissioners when on official duty. The 2-A Budget fund is used for the salary of a full time State Clerk, part time technical aid, and for equipment used in the District.

The Federal government provides three sources of funds, consisting of: CO-1—which is the normal operating fund for the Soil Conservation Service. FP-2—acceleration funds provided from funds given to the little Sioux Project. ACP—funds provided from the County ACP allotment to repay the Soil Conservation Service for services rendered in addition to the normal District program for the following: 1. Certification that the practice is needed and practical. 2. Site, selection and layout. 3. Supervision of installation. 4. Certification of proper completion of the practice.

DISTRICT SECRETARY



ARNOLD PUTENSEN
Secretary

Ida Soil Conservation District

Arnold, his wife Charlotte, and three children, Charles, Gary and Connie, own and operate 120 acres in Griggs Township where they live. They also own and operate a half-section just across the line in Woodbury County, and rent an additional 100 acres in Battle Township.

Eight acres of this land are terraced and 1,933 feet of tile have been installed to drain wet waterways. A rotation of Row Crop - Row Crop - Grain - Meadow - Meadow is practiced on the home farm. All farm operations are carried out on the contour.

Arnold has served on the Ida County ASC Committee, and is a member of the Lutheran Church at Holstein.

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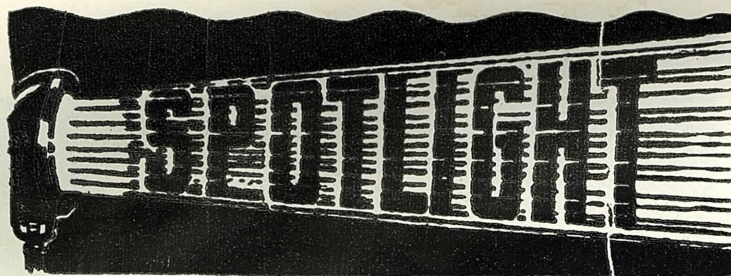
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IOWA SOIL AND WATER



Editorial

Prior Planning Is Necessary

By Kenneth H. Burnett
Work Unit Conservationist

The Iowa Natural Resources Council was set up by law in 1949. Among its other duties was the regulation of structures on any flood way. This included approval of the design of dams so that there would be no undue flooding by water impounded by the structure and no danger of the structure failing, and producing a flood down stream.

The last Legislature enacted a new Iowa Water Law and designated the Iowa Natural Resources Council, through its Water Commissioner to regulate the use, withdrawal, or storage of water. The Council has decided that water storage permits are necessary for any dam impounding more than 10 acre-feet of water (10 acre feet are contained in a pond with one acre of surface and an average depth of 10 feet.) Permits are also required for the use of water from such a source in excess of 5,000 gallons a day.

Construction approval is granted by the Council after the detail plans for the structure have been examined by the Council's engineers and found to be satisfactory. This usually takes about 30 days, since the Council which meets monthly and not the engineer issues the approval.

Obtaining water storage and use permit is somewhat more complicated. An application, accompanied by a \$10.00 filing fee, is submitted to the Water Commissioner. He is then required by law to publish notices in a local paper, and to hold a public hearing. After the hearing he may issue a water storage and use permit for a period not to exceed 10 years.

The application notice, hearing, and issue of the permit, usually takes about 60 days.

If the plans for the structure are permitted at the same time as the application for water use and storage, the two processes can run concurrently and only an average of 60 days is required.

Soil Conservation Service engineers require two weeks at a minimum to survey and design a dam. Thus, it would appear

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WILLIAM ROSSOW
Commissioner

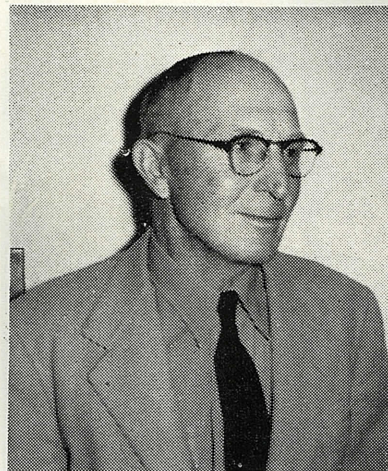
Will owns and operates 120 acres in Maple Township. He has been practicing soil conservation since 1948. Conservation farm plan on his farm includes crop rotation, four acres of terraces and over all contour farming.

While his family was growing up, he was very active in 4-H work and was one of the first people to bring soil conservation to the Ida County 4-H program. In carrying out his soil conservation work he was assisted by his wife, Botilla, five sons, Edgar, Verdine, Robert, Wayne, Norman, and two daughters, Esther and Eldora.

He is a member of the Lutheran Church in Battle Creek.

that 2½ months are necessary from planning to the start of construction—prior planning.

It would be well for all farmers contemplating to build structures, to start the planning as soon as possible.



W. F. BUROW
Commissioner

Walter is serving his second term as District Commissioner. He owns 680 acres in Maple Township. He has had terracing on his farms since 1948, and operates with a good crop rotation, and contouring.

For the past several years, he has had the additional duty of being the Ida County District's representative to the Little Sioux Works Committee. He is also a past Chairman of the District, and for many years was active in ASC work. He is a member of the Ida County Farm Bureau, a Director in the Bank at Battle Creek, and an Elder in the Presbyterian Church in Battle Creek. He is assisted in these duties by his wife Hertha, and three daughters, Georgene, Mildred and Arlene.



C. C. CHALLMAN
Chairman Commissioners

Chester owns and operates 480 acres in Galva Township. He started conservation work in 1951, and at the present time operates on a six-year crop rotation, and has eight acres protected by terraces. All the farming operations are conducted on the contour.

In addition to his soil conservation work, Challman is a member of the Ida County Farm Bureau, has served one term as a County Supervisor, and a School Board member. He is a member of the Methodist Church in Galva.

His family includes Mary, his wife, a son, Chester, Jr., and a daughter, JoAnna.

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HOLSTEIN, IOWA

IDA COUNTY ASC PERSONNEL



ASC County Committee. left to right: John Irwin, Member; Edwin Hargens, Vice Chairman; Leslie Magnuson, Chairman.

ASC SERVICES AVAILABLE FOR SECURING BETTER LAND MANAGEMENT

By Henry Ruhser
Office Manager

The Ida County Agricultural Stabilization and Conservation Committee appreciate the opportunity to relate the services available through this office in promoting conservation uses to our soil. Whether we are landowners or tenants, our responsibility is not limited for production at the present time, but to maintain the fertility of the soil in such a manner that production can be increased to fulfill required needs in succeeding years.

To assist this need, the ASC offers two programs: the Agricultural Conservation Program and the Reserve Program. An ACP formulating meeting is held every year for the purpose of making recommendations as to changes needed in current ACP practices. This meeting is attend-

ed by: County ASC Committee, township committeemen, representative of the Soil Conservation Service, Soil District Commissioners, County Extension Agent and a representative of the FHA.

These Committeemen and the office personnel have a splendid opportunity to explain the merits of various conservation practices and the assistance available from ACP funds. This assistance is known as cost-sharing and means that the Federal government through the Department pays part of the cost of carrying out needed and desirable conservation practices. Because of this help, many farmers are encouraged to initiate many needed conservation practices.

In Ida county we are presently granting assistance on the following practices for the 1959 program year:

1. Establishing a permanent vegetative cover.



Asc Office Personnel. Left to right, sitting: Ethel Borchers, Administrative Clerk; Henry R. Ruhser, Office Manager; Violet Grove, AA & MQ Clerks. Left to right standing: Darlene Kistenmacher, Program Clerk; Phyllis Hoaglund, PS Clerk; Vera Stewart, ACP Clerk; Carol Rupert, Program Clerk.

2. Initial treatment of farmland with limestone.
3. Contour stripcropping.
4. Establishing a stand of trees or shrubs.
5. Improving permanent vegetative cover.
6. Livestock ponds.
7. Sod waterways.
8. Initial establishment of permanent vegetation as protection against erosion.
9. Standard terraces.
10. Level or basin terraces.
11. Diversion terraces.
12. Erosion control dams.
13. Construction of permanent open farm drainage ditches on cropland.
14. Tile drainage.
15. Establishment of a vegetative cover to protect cropland throughout the 1959 crop year.
16. Initial establishment of contour farming operations on non-terraced land to protect

soil from wind or water erosion.

17. Constructing wells for livestock water as a means of protesting and maintaining established vegetative cover.

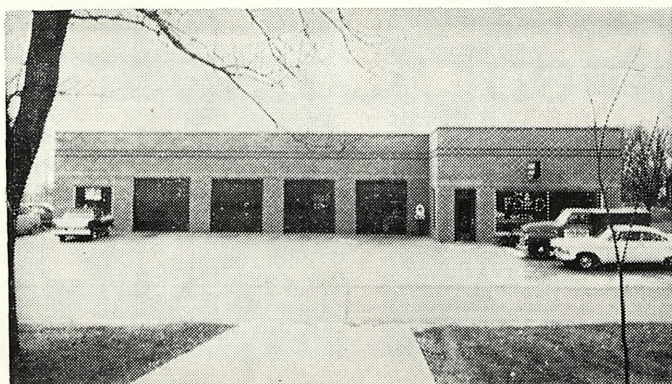
Requests for ACP funds must be made before performance is started and can be made at any time during the year. These requests must have county committee approval and certain practices, the Soil Conservation Service make the inspection to determine if the performance is satisfactory.

The amount of funds available for 1958 was \$63,000 and there will be \$83,000 available for the year of 1959.

The Conservation Reserve of the Soil Bank provides for the withdrawal of cropland from production, helping to adjust total crop acreage more nearly in line with demand. At the same time, it provides that farmers establish and maintain sound conservation practices on the land they put in the Reserve. It is a voluntary program, under which farmers sign contracts to take part for a definite period of years. In return, the Government assists producers (1) by sharing the cost of establishing conservation practices, and (2) by making annual payments during the period each contract is in effect.

This fall 104 farmers in Ida county applied for Conservation Reserve contracts. There will be approximately 70 contracts signed. This plan is to divert some of the land currently being used for the production of agricultural commodities into specific conservation uses.

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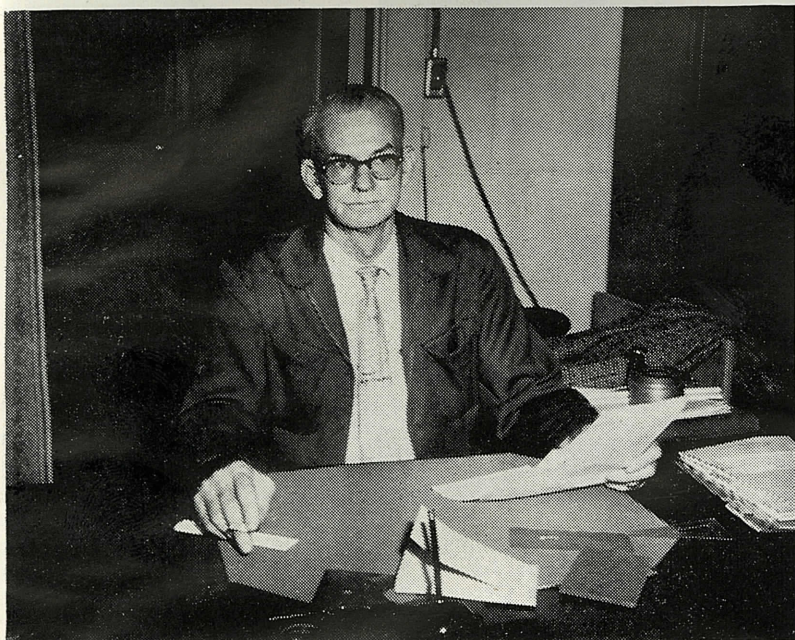
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Soil Conservation Service & State Personnel



George E. Lamp, Area Conservationist

Conservation At The Area Level

By George Lamp
Area Conservationist Area 1

Area IA-1 of the United States Soil Conservation Service includes the Ida County and six other Soil Conservation Districts located in the heart of Siouxland, originally made famous by the Sioux Indians. Within the past 100-odd years, Siouxland has become even more famous for its agricultural products. The meat production of Siouxland farmers has made the Sioux City Stockyards the fifth largest livestock market in the world. This area is also famous for producing large quantities of grains. Fertile soils tended by thrifty people have made this land a great agricultural area.

Most of Siouxland is covered with loess materials ranging from a few feet to over 100 feet in depth. A high per cent of the area is suitable for row crop production. Practically none of the area was put under the plow more than 100 years ago; most of the area has been brought into production within the last 80-odd years.

According to recorded history, early settlers found lush growths of blue stems over most of this area. The settlers were obliged to locate on the higher ground since the so-called bottomlands and small valley floor areas were too wet to plow. Farmers found this loess material to be very fertile. Crop yields were high when the land was first plowed.

As the area developed agriculturally, ditches were dug to drain the small valley floors,

channels of the main tributaries were enlarged and leveed, and by 1910 a sizeable portion of the so-called low lands was put into row crop production. During World War 1 many areas of the steeper slopes were plowed in the interest of "all-out wartime production." It was only a few years after this that farmers realized the seriousness of sheet and gully erosion in these loess soils.

In the late 20's a few farmers made some effort to check this erosion. Some contour cultivation was practiced, and a few terraces were installed before 1930. In the late 30's two CCC Camps were located within the area to demonstrate conservation practices. These set the stage for greater action. In the 40's the area was totally organized into Soil Conservation Districts under the Districts' Law of the State of Iowa. Once districts were organized, farmers and businessmen alike set themselves to the business of keeping Siouxland a flourishing agricultural area. They immediately put themselves to the task of identifying soil management problems. They discovered that the soils were highly productive but very erosive. In many instances it was observed that soil losses from fields were as high as 100 tons per acre per year. Where small drainways had developed up through small valley areas, large gullies were soon developing to depths of 30 to 50 feet, and occasionally to depths of 60 feet or more. The most fertile crop lands located in small val-



The Work Unit Staff of the Ida County Soil Conservation District. Seated left to right: Gladys Thornhill, State Clerk; Kenneth Burnett, Work Unit Conservationist. Standing: Charles Bodholdt, Conservation Aid; George W. Witters, Conservation Aid.

ley floor areas were being destroyed at an alarming rate. Roads were being severely damaged. In several counties, bridge maintenance had increased until available road funds had to be used mostly for maintenance, and new road improvements were greatly limited. They also observed that the drainage improvements which had been constructed across the bottomlands of the Little Sioux valley and other similar areas were being severely damaged by heavy sedimentation. Maintenance on these drainage improvements became so costly that local drainage districts were no longer able to keep the improvements in a satisfactory state of repair. At the same time railroads and other public facilities were being severely damaged. Several of the smaller and some of the larger communities were frequently damaged after heavy rainstorms.

After recognizing the extent of soil and water management problems of the area, Soil Conservation Districts immediately enlisted the aid of the Soil Conservation Service, Extension Service, Experiment Station technicians and others to draw up plans to protect these rich soils from further damage. The District programs were designed to reduce erosion and other damages which result from flood run-off.

With assistance provided by Soil Conservation Service personnel, soil maps were prepared for lands on which plans are requested.

These maps provided pertinent information, such as types of

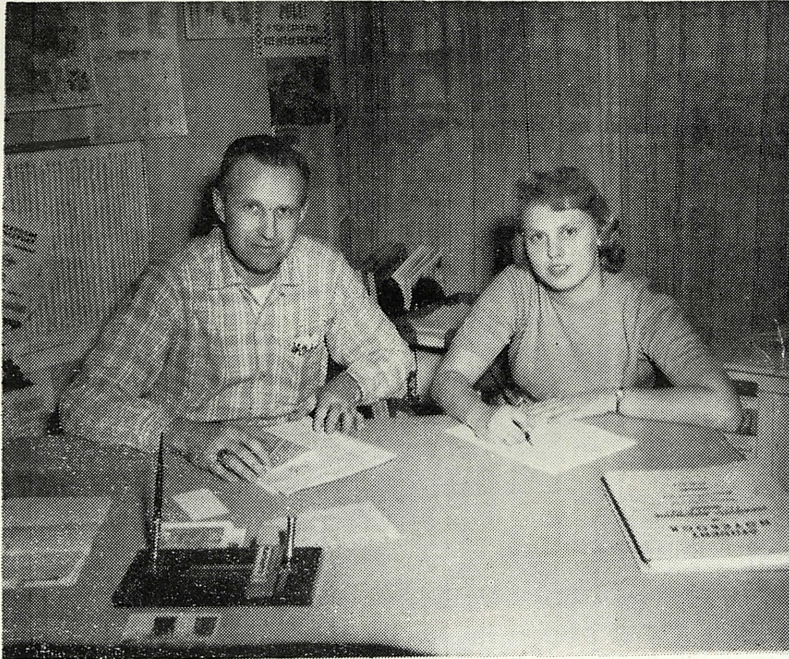
soils, amounts of soil that had been eroded from the areas, and other physical characteristics related to erosion and fertility. At that time, as is the case today, the general approach was to prepare a basic farm plan for each farm unit. Under this scheme each acre of a farm is put to its best use. Mechanical practices, such as terraces, grassed waterways, contouring and diversions, are used to hold the rain where it falls and greatly reduce run-off. Crops are rotated to aid in maintaining soil fertility and soil tilth. Fertilizers are applied where fertility has been greatly lowered, or in cases where the farmer wishes to increase crop yields. The mechanical practices and the soil management measures are blended together for each individual farm in such a manner as to keep annual soil losses to less than 5 tons per acre per year, as well as to keep soil fertility at a desirable level and in the end to provide for the greatest crop returns from the farm.

In the mid 40's the so-called Little Sioux Flood Prevention Program came into being. Under this program the Federal Government provides funds and technical aid to Soil Conservation Districts to install watershed protection measures designed to reduce damages from flood producing storms. The Ida County, and other Soil Conservation Districts concerned, have developed new work plans and programs to encourage farmers to organize into watershed

—Continued on page 16

Ida County Extension Service

4-H



County Extension Staff: Everett D. Halstead, County Extension Director; Barbara Albertsen, Office Assistant.

THE ROLE OF EXTENSION IN THE DISTRICT SOIL CONSERVATION PROGRAM

By Everett Halstead

County Extension Director

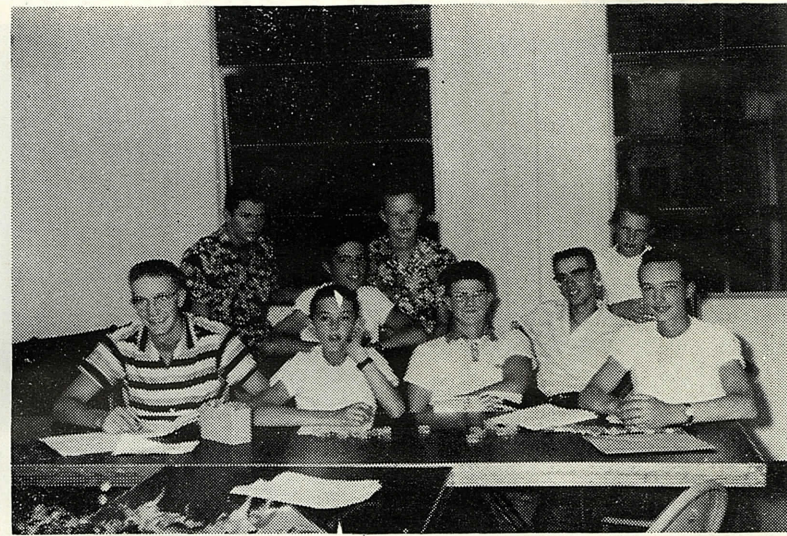
The Ida County Extension Service under the director of the County Agricultural Extension Council cooperating with the Iowa State College and the United States Department of Agriculture is very much aware of the need to conserve our soil which is the number one resource available to farmers. This chief resource is found on the 1316 farms which include some 271,731 acres of rolling land. Only 38% of this land is owner operated according to the Assessor's Annual Farm Census.

The Extension Service is charged with the responsibility of the educational phases for all farm agencies in the county and certainly the Soil Conservation program is an important one. No farm is unimportant as we look to our food supply sometime in

the future. No nation worth its salt will permit land to deteriorate and Extension has its part to play in preventing it.

In an effort to be of the greatest service to the people of our county, the Extension Service is cooperating with the Ida County Soil Conservation District in carrying out their educational program. In order to keep abreast of the work being done the Extension Director regularly attends the monthly meetings of the District Soil Commissioners.

The 4-H Boys of Ida County will be studying Conservation and Land Use as their special activity this year. This includes an understanding of how soil is formed, why some soils erode worse than others, land use patterns, soil and water conservation practices in use on the home farm and becoming acquainted with the people in the county who are available for special help in this area.



Ida County 4-H crop judging team, left to right: Lynn Meier, Robert Wilken, Benedict Krenk, Johnny Krenk, Charles Putensen, Jerry Aplegate, Bruce Schmidt, Gerald Krenk and Freddie Krenk.

Extension has only one product to sell—education. We ask for the ability to inspire farmers to take care of their land, conserve it, build it, and develop better practices so that the land will pass on to their children better than they found it.

conservation work applied, to interested parties should make every effort to apply the need conservation measures as rapidly as possible, Mr. O'Hara pointed out.

STATE APPROVAL FOR PIERCE CREEK WATERSHED APPLICATION

Joe O'Hara, chairman of the Page County Soil Conservation District Commissioners, announced today that the application for planning and assistance for the Pierce Creek Watershed No. 1 was approved by the State Conservation Districts.

The application was approved at a recent meeting in Des Moines and will be forwarded to the Washington office of the Department of Agriculture for further study.

Since watersheds are selected for planning and construction on the basis of the total amount of

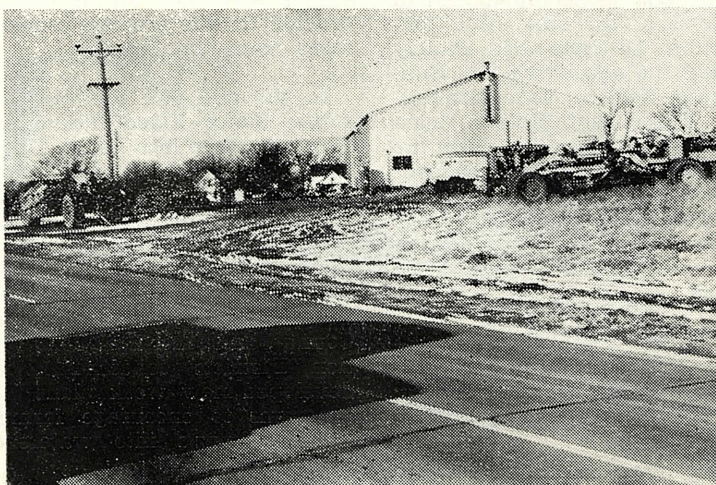
Short Course Set For January 13, 14

The planning committee for the 14th Annual Short Course has announced that this event will be held on January 13 and 14, 1959 at the Memorial Union, Iowa State College, Ames, Iowa.

A full two days have been planned beginning with registration at 9:00 a. m., on Tuesday. A complete program will be given in the January 1959 issue of this publication. All business sessions during the two days will be held in the Gallery at the Memorial Union with the banquet scheduled for each evening to be held in the South Ballroom.

All district commissioners are urged to make plans now to attend this worthwhile event. The highly informational and entertaining two days have been planned, and anyone interested in soil and water conservation is cordially invited to be present at any or all of the meetings.

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James W. Wallace, Conservation Officer

WILDLIFE OF IDA COUNTY

By James W. Wallace
Conservation Fish and Game
Officer Ida and Sac Counties

Ida County is located in northwest Iowa in what may be called the western parts of the Missouri Bluffs. The southern and biggest share of the county is fairly hilly with the absence of any great tract of timber except for an area of about two miles which borders the Little Sioux River.

The wildlife during the last five years has seen some great changes and a wonderful bounce-back. As of five years ago, there was a fairly good pheasant population. Then the drought came. Three bad nesting years and a poor cover in the area cut a tremendous hole in the pheasant population. But with many acres being put into the soil bank, good farming practices upon the land and an excellent nesting year, we had a wonderful pheasant population. Just as an example: On one biology brood count of a year ago, only 48 young birds were counted. This year on the same route, I had a count of 268 birds, which is a huge increase over last year.

Although we have no quail season (the two counties to the west and south do) there is a fairly good population in certain sections of the county. We have done a little adult quail stocking on certain farms where we have at least a mile of good field edge cover. On these farms there is usually one covey of quail and

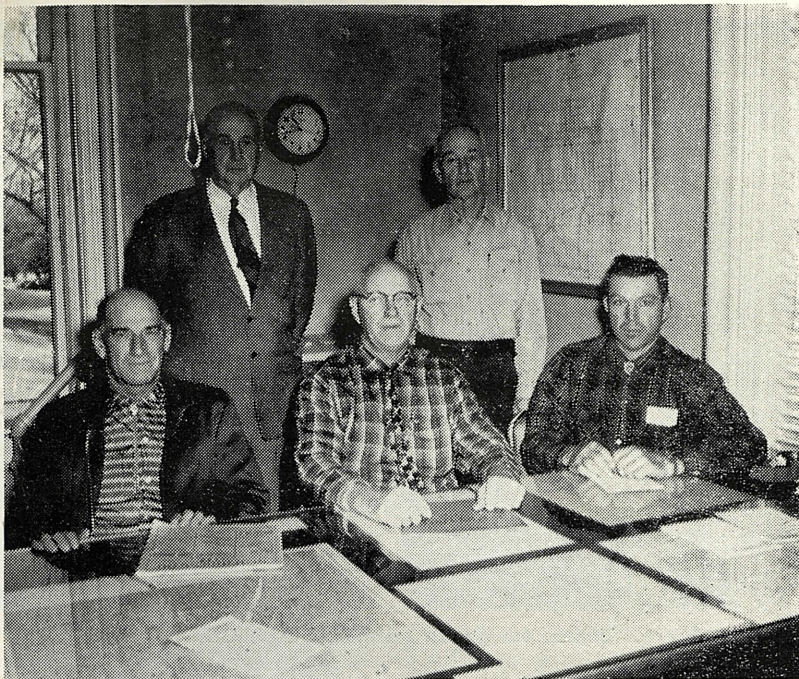
on two we have found as many as four coveys this year, showing we have had good reproduction.

As Ida County is rolling, we have many areas which I like to think of as "evening recreation areas," known to the rest of the world as farm ponds. We have many of these ponds throughout the county, with many recreational hours being spent fishing and swimming at these sites. In the fall these areas furnish some fairly good duck hunting, and on one pond in particular, some geese were shot from this fall.

We have carried on an extensive fish-stocking program throughout the county from the fish hatchery at Lake View. Many of these ponds were built during the drought and this was the first year with ample rainfall to fill many of the ponds. We also had to restock one pond that had failed because of lack of water. In stocking the farm ponds, we follow the recommended practice set up by the State Conservation Commission, which is followed throughout the entire state.

One other amphibian is also stocked, and that is the bullfrog tadpole. In loading the fish truck directly from our brood ponds, the bullfrog tadpoles are also collected and stocked in the ponds the same time as the fish. So far this practice has not panned out too well. I believe the reason for this is that we are too far north with the winters being too cold. But some day in

Ida County Personnel



Ida County Personnel seated, left to right C. J. H. Hemer, Arthur; L. B. Bertelsen, Chairman, Battle Creek; Elvin E. Leonard, Holstein. Standing, left to right: J. W. Fair, Assistant County Engineer and George S. Witters, County Engineer.

northwest Iowa they may take hold in the farm ponds and the farmer may say to his neighbor, "Well, guess I'll go down to the pond and get a mess of frog legs." instead of "Guess I'll go down and get a couple of bass for dinner."

The stream fishing in the county is confined mainly to the Maple River, which is a tributary of the Little Sioux River. It is a typical prairie stream with high cut banks and very few trees along its edges. In previous years it has provided some excellent catfishing. But the past three years, because of lack of water, fishing of all types has been very poor. This stream also provides some fur-bearing animals for trapping purposes. At present there are about three beaver dams in the county. The one immediately north of Ida Grove is quite a novelty. Due to the lack of timber along the banks, the beavers have built this one out of barrels and tin cans from the city dump, along with a few sticks and stones that were available. So you can see the beaver has learned to adapt his living habits to man.

I think you will agree that throughout Ida County there is a lot of outdoor recreation. For a county that has been blessed with rolling farm land and a few prairie streams, man has not only come to farm the land extensively, but has made a place for wildlife and fishing, which in themselves are great resources. The farmer, because of newer and more modern farm implements and the townspeople with

their days off have more hours to spend at the recreational sites of their county. Through the co-operation of the farmer and with the help of the State Conservation Commission and governmental agencies, we hope to establish many more of these areas in the future.

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Teachers' Conservation Camp



Myrtle Brant, 4th grade teacher, Battle Creek school



Mrs. Eileen Bodholdt, third grade teacher, Ida Grove school

Iowa Teachers' Conservation Camp

By Myrtle Brant

Thinking of Springbrook State Park at Guthrie Center several months ago after summer session, makes me think that I had taken a short vacation with teacher friends "living up" the outdoor life. This course which entitled me to three hours of college credit in the science field and lasting only three weeks, gave me a bird's-eye view as to the many wonders nature has in store for lovers of the great outdoors. It seemed as though we were just beginning to understand how to classify rocks, although we had several days of rock study and field trips, when "bingo" we were off on another field trip and found ourselves in some farmer's field judging the soil content, studying erosion etc. Field work on tree identification proved real interesting as did our study on conservation and uses of water. No one will ever forget our observation of plant and animal life in the marshes as we waded in water yea high with binoculars held above our heads so as not to get them wet. A little fun and humor mixed with all our work seemed to keep everyone in the best of spirits.

I can't think of Springbrook but what I think of the friendly attitude and close relationship between teacher and pupil. It made no difference if we were in doubt as to which rock we were analyzing or whether it was some leaves to identify, we were never without the help of our "chief" friends. Class instruction was always held with maximum interest as it was led by specialists in their fields or teachers who were ready to discuss any or all questions.

Page 12

Along with our work, we always had time for a little recreation. What fun we had playing kitten ball or volley ball right after our evening meal! Then too, the beach and swimming pool were near enough to be enjoyed by all. As for me, I enjoyed spending my time at the Industrial Arts Building working on projects I knew I could bring back to my classroom to use. These things included an ant farm box, insect box, electric board, bird houses, rock collection box etc.

Maybe you've wondered how this course has been applied to the fourth grade level. I hope to get my fourth graders to understand that all the outdoors, whether it be water, soil, wildlife or what it may be, must be conserved but yet its here for us to enjoy and find happiness in the study of it.

We have taken up only a few portions of nature study and in our spare time caught, killed and mounted butterflies and insects. We have had an insight to tree identification and made a few booklets on leaf collections. The birds have caused considerable interest as we watched and studied a caged chickadee for a day, fed the birds on our feeder and made bird booklets concerning Iowa birds. Who had more fun watching the ants in the ant farm box—the pupils or teacher?

We found the ants along the roadside and brought them in for close observation.

These with more to come are just a few things that we have enjoyed studying and know as we grow older we must conserve our natural resources to keep the world in supply.

My Experiences at Springbrook

By Mrs. Eileen Bodholdt

"Tweet! Tweet! Hear the birdies sing! Its 5:00 a. m. Time to get up for the bird hike." That's the way a day sometimes began at Springbrook State Park, Guthrie Center, when the Iowa State Teachers College Conservation Camp is in session. The particular course I attended was divided into three main parts. They were conservation of soil, conservation of water, and conservation of forests, as particularly found in Iowa.

We learned by doing or observing first hand. This was not merely a lecture course. We traveled over one thousand miles really seeing **conservation**. We had field trips to the Ledges at Boone, to further acquaint us with the history and makeup of soil. We took many interesting trips in and around Springbrook. We visited a virgin woodlot, plus other woodlots, the nursery at Iowa State College in Ames, the Little Sioux Flood Control Project which included Ida County and a stop at the experimental farm at Castana. Our journeys also included the sewage disposal plant at Audubon, a saw mill at Jefferson, a "wet" trip into a

marsh. Oh, I could go on and on but it all adds up to observing the real thing—not just reading or hearing about conservation.

We learned how to apply what we had learned in our field experiences to classroom situation. We "taught" some conservation ideas and gave demonstrations to our classmates.

Children think conservation fun and interesting. Anything scientific is really "it" right now. I've shown my rock collection to my own school groups plus some interested Cub Scouts. They reminded me of the "rock hound" who spoke to us at camp. We all found out how much fun it is to press leaves in a leaf press and mount them in various ways. Boys and girls in this rural community want to know more about the land where they live and what it is made up of. We had fun trying to figure out the "why" of things.

This course did a good job presenting conservation of our natural resources on a practical level. Our regular instructors plus the many guest instructors we had, really enlightened about the vital need for conservation. I hope to try to help children realize how important it

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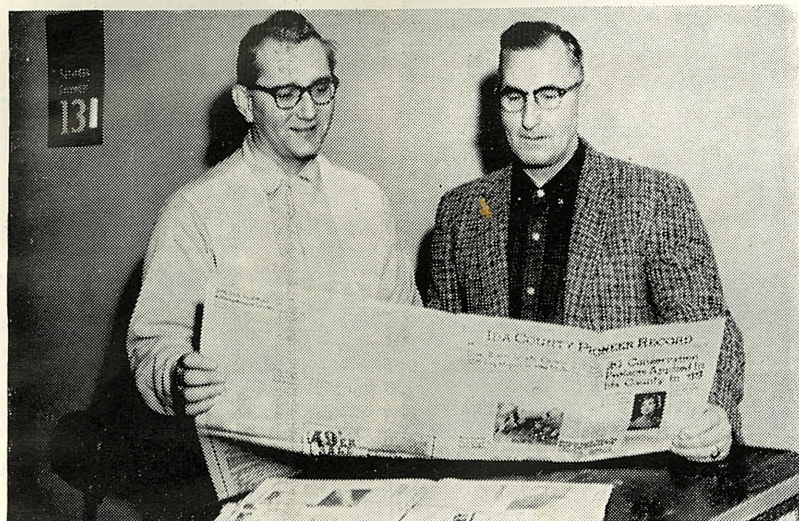
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IOWA SOIL AND WATER

Ida County Newspapers Aid District With Conservation Pictures and News



Charles Hansohn, left, and Dale Merrill, right, News Editor and Publisher of the Ida Grove Pioneer Record.

Conservation, The Key To Prosperity

**Dale Merrill, Publisher
Charles Hansohn, News Editor
Ida County Pioneer Record
Ida Grove, Iowa**

Agriculture today is a highly mechanized industry. While we have substituted machine-power for manpower, there is no replacement for our soil and water resources upon which agriculture depends for its life blood. Thus, many farmers today find themselves faced with the necessity of rebuilding their nutritionally starved soil, neglected through the years and conserving what soil and water resources they have.

Farmers have teamed together in organized watersheds and soil conservation districts to solve their common problem. Not all have joined the fight against wasteful erosion and soil depletion, but that group is rapidly becoming a minority.

Land which has been neglected, washed bare of its topsoil,

guttured by deep gullies, is now being brought back to life through the efforts of conservation minded farmers. Sometimes the rewards seem slow in coming but it takes time to put life back into soil, just as it took time for neglect to tear it down.

There are many ways in which soil and water resources can be compared to the machinery used to plant, till and harvest crops. One example might be comparing the land with a tractor. A tractor requires elements such as gas, oil, water, electricity, etc., if it is to run . . . land must contain nutritious elements if it is to grow healthy crops—elements that are preserved or replaced by good soil conservation practices.

Soil and water conservation is the key to agricultural productivity and prosperity today and tomorrow. We must safeguard the resources we have for the welfare of generations to come.

PRESIDENT'S CORNER—

(Continued from page 5)

District program will slow up in Iowa.

This amount in asking would only be about two cents an acre on Cropland in Iowa.

Please do your part locally.

Also we are in need of your District dues for 1959 as funds will be needed to present our asking to the legislature. Please send dues as soon as possible.

I want to thank Newman Lyle our Vice President for assuming the responsibilities of his office in

IOWA SOIL AND WATER

representing the officers at seven of the nine regional meetings.

It is indeed a pleasure to have help in this worthwhile program of ours.

Mark your calendars for January 13 and 14 as the Annual Short Course for Commissioners will be held at Iowa State College at Ames. You will receive the programs very soon. All commissioners are invited with expenses paid of your 1A fund will stand it. Please plan to have your District represented.

Also don't forget to send your reservations for the National As-



Bruce Bye, left, and Harland Hanson, right, are publishers of the Holstein Advance.

THESE PEOPLE LIVE IT!

By Harland Hanson

Editor Holstein Advance

We have had occasion to observe, over the past three years during which the Soil and Water magazine has been printed in our plant, quite a number of men who have helped to gather the material for the counties featured in those issues.

We couldn't help but be impressed by the missionary spirit of these practicing conservationists, the commissioners who have given much of their time and energy to the task of selling and converting all the farmers of our state to the immediate and long-range benefits of conserving our soil and water.

It has been because of their unselfish efforts that good conser-

vation practices have become the rule instead of the exception.

We are proud of the fact that our county, Ida, has kept pace with the growing movement of conservation. Some projects in this county are now nearing completion that would be outstanding projects anywhere. Whole farms have been reclaimed from sub-marginal operations, and become profitable again.

The transformation that has taken place is truly amazing. Terracing, grassed waterways, gully control and newly created farm ponds have given the land a complete "face lifting," and have created a new pride of ownership, not to mention greater land values.

Our hats are off to the many farmers who have served so well in the cause of conservation. Having realized the benefits themselves, they have done everything in their power to make everyone conservation conscious. Their zeal has not been without results. Ida county and Iowa have made enormous strides toward their goal.

sociation meeting in Houston, Texas, February 1-5. This will give you a good week's vacation and you will be royally entertained in Texas. We should have a good representation at Houston this year.

Registrations must be in by January 15 if at all possible.

Don't forget your Dues.

Will see you at Short Course.

PLAN AHEAD

See

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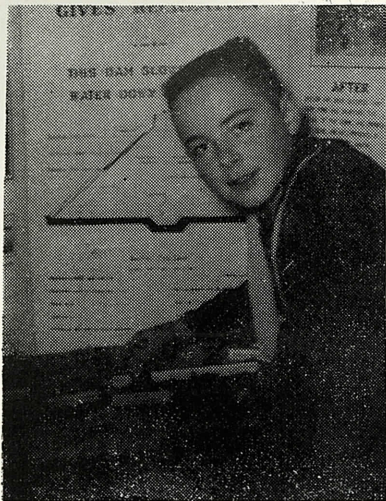
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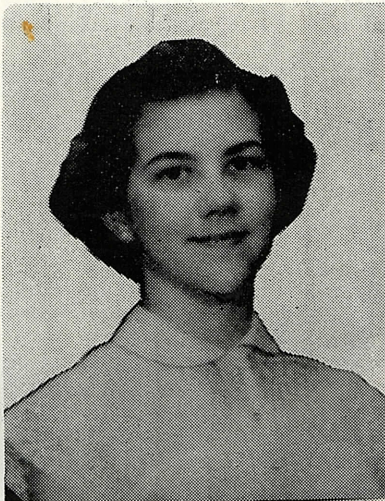
IDA GROVE

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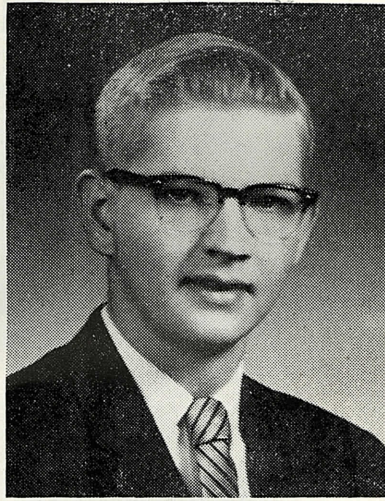
Iowa State Grange Sponsors Essay Contest



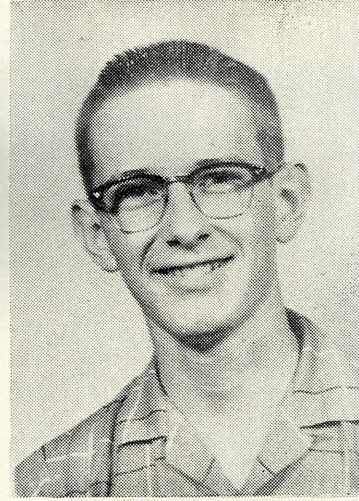
Gary Becker, Dyersville, Iowa



Pamela Ann, Keil, Lakota, Iowa



Darrell Goodhue, Carlisle, Iowa



Edwin Hoffman, Mt. Ayr, Iowa

IOWA STATE GRANGE ESSAY CONTEST

The Iowa State Grange and the Iowa Manufacturers' association were sponsors of an essay contest held in Iowa recently.

The contest was open to any young man or woman under 21 years of age. One hundred eleven entries were received in the 1958 contest.

The title of the contest was "Better Living Through Conservation," with six sub-topics for the essayist to choose from. These were:

1. How soil conservation can affect our area
2. Water is both a friend and an enemy
3. The place of trees in a conservation program
4. The place of wildlife in conservation and better living
5. What conservation means to our family
6. Whose responsibility is soil conservation

Awards were made at a banquet in Grinnell, Iowa, to four contestants, determined by the judges as the winning entries in the contests.

The award winners and their awards were as follows:

- First place—Gary Becker, Dyersville, Iowa, \$40.00
Second place—Pamela Ann Keil, Lakota, Iowa, \$30.00
Third place—Darrell Goodhue, Carlisle, Iowa \$20.00
Fourth place—Edwin Hoffman, Mt. Ayr, Iowa, \$10.00

Judges for the contest were: Frank H. Mendell, State Conservationist, SCS, Des Moines; Hampton Hall, State Supervisor Vocational Agriculture, of Des Moines; Marvin Anderson, Associate Director of Extension, Iowa State College, Ames; and Harry D. Linn, Executive Vice President, Iowa Manufacturers Association, Des Moines.

Iowa Soil and Water wishes to congratulate The Iowa State Grange, Mr. Loren Murphy, master of the Grange, and the Iowa Manufacturers association for sponsoring such a worthwhile contest. Certainly any type of contest that encourages conservation of our natural resources lends a hand in making the great State of Iowa, **greater**.

The four winning essays appear in this issue of Iowa Soil and Water.

THE NEED FOR SOIL CONSERVATION ON OUR FARM

By Gary Becker
Dyersville, Iowa
Ninth Grade

My great-grandfather, tired of Austrian insecurity and peril came to America and found the answer to his dream on a pleasant acreage of rich virgin timber in northeast Iowa. This rich loam he cleared of trees. Being a carpenter and a mason by trade, he built a lovely house and barns with sturdy walnut and oak from this farm. My great-grandfather lived a peaceful and satisfying life enjoying the comforts of his own land. He found shelter from the winds by tall pines and enjoyed the fruits of his orchard which he planted. This, became the heritage of my parents!

My father and mother took possession of this eighty-acre farm in 1936. With it came a problem great-grandfather had been fully aware of. A large gully had formed and was devouring the fine mulchy soil right up the center of the farm. To make matters worse, it was heading for the farm buildings which were lo-

cated on top of the hill. Within lifetime, I was told, our whole farm could break away, gain momentum, and be washed into the Gulf of Mexico. This would leave our farm unproductive and worthless. Our farm could then be characterized as General Alfred Sully in 1864 described the bad lands of South Dakota with this sulphurous world picture: "Hell with the fires out."

The virgin topsoil is the result of a million years of growth and decay. Here, on our farm, thick, black loam which helps build the nation, (for soil is the foundation of everything) was wasting away within a generation! I recall my saying, "Something must be done about this!" I remember accompanying my father to the gully after a heavy rain and watched the gush of water churn through the rolls of wire, rubbish, machinery, and stumps, materials we had placed there in previous attempts to check the gully. We were convinced that this was not the solution to our problem. It made the water more turbulent and did more harm than good.

Success in Controlling Water Run-Off

We next attempted to solve our problem by erecting a cement structure across the gully. Several days were spent carrying materials to make this barrier, too, proved inadequate for heavy winter's frost produced large cracks in the soil, and the first spring thaw tiny streams followed the cracks in the soil and soon these widened and deepened and once more the water was set free. In 1951 another attempt was made. This cement structure was quite successful, still inadequate to completely stop the growth of the gully. A series of these would have been required to do the job.

Continued on page 34

IOWA SOIL AND WATER



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History Of Ida County Soil Conservation District

The Ida County Soil Conservation District was chartered February 19, 1945. Previous to that date, Donald H. Dodge, County Extension Director with the aid of many interested farmers had set up hearings and a referendum on the establishment of the District. On a petition circulated in Ida County 434 out of 1462 landowners requested that a District be formed. The District held its first regular meeting February 5, 1945. Previously three commissioners, Ed C. Perion, J. B. Scott and Henry Dall had been elected. At this meeting, Mr. Dall was elected chairman and Donald H. Dodge, was appointed Secretary. In February and March the District worked out its work plan and program and executed a Memorandum of Understanding with the Iowa Agriculture Extension Service, and Soil Conservation Service.

1946

Kenneth H. Burnett was assigned as Work Unit Conservationist for the District in March, 1946. His first duties in the District were the preparation of several farm conservation plans and the organization of several sub-watersheds for the Little Sioux Flood Control project. The project had been authorized by Congress in the early 1940's but work was suspended during World War II.

Most of the Farm Conservation plans at that time contained provision for contouring and good crop rotations but very little else. Many farmers were reluctant to even practice contour farming principally because they were not familiar with it.

Robert Hollins joined the staff as Conservation Aid.

1947

Albert Murphy replaced Robert Hollins as Conservation Aid. Ross Baumann replaced J. B. Scott as District Commissioner.

1948

Construction work was started on the Perion-Kirkholm Watershed. This project started considerable controversy in the District and elsewhere, particularly with regard to costs per acre benefited. All farmers said they would like to have a similar project covering their farm but most of them felt that the costs could not be justified on nationwide basis. Nevertheless the watershed was the show spot in the District. Many people even from foreign lands came to look at it and see how the project worked. With the experience gained in this watershed and several similar ones in neighboring Districts, the Soil Conservation Service worked out an "Alternate Plan." This Plan replaced many of the structures with terraces and resulted in a considerable saving to both the landowner and taxpayer.

Bruce Marcue replaced Dodge as Secretary and County Extension Director, and Ray Bresnahan was appointed District Treasurer.

1949

Joseph E. Clarey, Jr., joined the District as assistant Farm Planner. His services were made available in order to speed up the farm planning job within the District and to help organize additional watersheds of the Little Sioux Flood Control Project.

H. L. Elk replaced Ed. C. Perion as District Commissioner.

1950

Paul Peterson replaced as Secretary and County Extension Director. Mr. Peterson inaugurated the Leaders Land Use Training Schools in the District. The School was set up to develop local leaders in Soil Conservation and to teach them not only the "how" but the "why" of different Soil Conservation practices. This program is still carried on jointly by the District and County Extension Service.

1951

Bruce Marcue replaced Clarey on our staff and Willard H. Roeske replaced Murphy.

1952

Henry Dall, District Commissioner, died in office. David Brueck was appointed to fill his position until the next regular election. During this year George W. Witters also joined our staff.

1953

The inauguration of Secretary of Agriculture Memorandum, number 1278 brought about even better cooperation between the District and the Ida County ASC.

Three farmers, Marvin Volkert, Douglas Township; Harlan Fredrichsen Battle Township; Erwin Schug, Grant Township, won first place for the District in the Sioux City Program for Permanent Agriculture. This on the basis of general excellence of soil conservation practiced on their farms.

1954

This year because of an early spring and late fall, permitted the District to break records in the installation of soil conservation practices, 69 miles of terraces, 26,252 acres of contouring, 95,561 feet of tile were some of the record breaking achievements.

1955

C. C. Challman replaced H. L. Elk as District Commissioner.

The construction work was started on the East Aldrich Creek Watershed in Maple Township. This was accomplished under the alternate plan substituting terraces and grassed waterway for structures. The land in crops was given better protection and cost was reduced materially. This project had been held up two years because of the Korean conflict.

IOWA SOIL AND WATER

Watersheds In Ida District



Pleasant Valley Watershed Committee, left to right: Bruce Goodenow, Harold Schreiber, Rolland Chisholm, and Arthur Gosch. This group organized in the spring of 1958.

Ida County ASC hired program service men to lay out contour farming, thus, reducing a peak work load on the District Staff.

Orlan Ehler, District cooperator, Ida County Board of Supervisors and District cooperated in the installation of two drop inlet structures on a new county road adjoining Ehler's farm. This was the first time this type of cooperative gully control had been attempted.

1956

East Aldrich Creek Watershed was completed this year.

The Rossow Watershed located in Maple Township and Woodbury County was organized as a sub-watershed of the Little Sioux.

1957

Bryce Vollmar carried out an unusual job on his 800-acre farm, located two miles north of Cushing. In the past two years he had installed 20.5 miles of terraces, built four water impounding dams, and shaped 4.5 acres of waterways. In addition he arranged cooperatively, with the Iowa Highway Commission to raise the intake an average of about 12 feet on five road structures on the south side of his farm (the relocation of U. S. Highway 20).

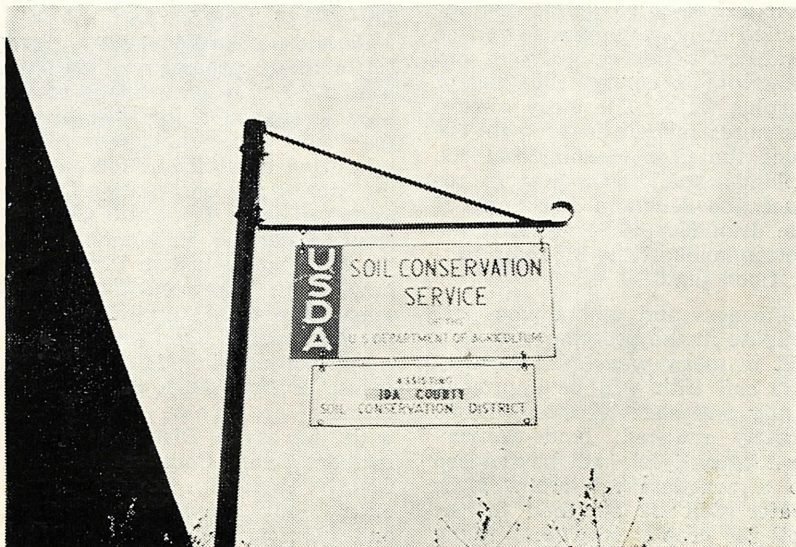
Harold R. Godown replaced Bruce Marcue on the District staff as assistant Farm Planner.

1958

Pleasant Valley Watershed, Maple Township was organized. Almost a quarter of the terraces installed this year were built in this watershed.

Harold R. Godown transferred to Webster City as Work Unit Conservationist.

LOOK FOR THIS SIGN



This sign marks the entrance to our office, located in the basement of the Post Office Building, Ida Grove, Iowa.

AREA LEVEL—

(Continued from page 9)

groups to secure aid under the new watershed authority. Farmers and others owning lands in that portion of the Little Sioux Watershed, which is south of Clay and Osceola Counties, are eligible for aid under the Little Sioux Flood Prevention program. The bottomlands in the flood plain of the Missouri River are outside of the area authorized for assistance.

In 1946, the Soil Conservation Service set up a staff of technicians to make surveys, plan watershed programs and otherwise to help Soil Conservation Districts carry out the objectives of the Little Sioux program. The State Soil Conservation Committee of Iowa provided some much needed guidance and leadership, especially in the early stages, in setting up policies and procedures for the program. The Secretary of the U. S. Department of Agriculture and the Commissioners of each Soil Conservation District in the authorized area of the Little Sioux have entered into agreements which stipulate conditions under which Federal funds may be made available for carrying out the program objectives.

Districts have accepted responsibilities for securing cooperation from farmers in planning and applying the needed farm conservation practices. Districts have also agreed to secure rights-of-way as needed to make surveys, plan, install and maintain the watershed improvements. And, perhaps most important, Districts have accepted responsibility for maintaining the program after each segment or small watershed is treated.

The watershed program is designed to reduce erosion and runoff at the source and, thus, greatly reduce other damages resulting from flood producing rains. Under this plan, water is held where it falls insofar as is practical. Improvements are installed in watercourses to reduce land destruction by gullying and otherwise to control the flow of surplus water. The gully control measures include features to reduce the flow of soil from the uplands and, thus, greatly reduce the sediment problems of the drainage ditches serving the bottomlands of the Missouri River flood plain.

Farmers and others who participate in the program will benefit in many ways. Soil fertility and soil tilth will be improved. Gully and sheet erosion will be greatly reduced; land destruction by gullying will be reduced to a practical minimum. More water will be retained in the soil for crop productions. Many of the wells, which have gone dry, will come back to producing water again. Sizeable areas of

land will be returned to row crop use. Structures will provide crossings over gullies which could not be crossed before. Stock watering facilities will be installed in connection with several of the dams, for a very reasonable cost to the farmer. Several of the permanent ponds may be developed into excellent recreation areas with very little extra cost to local people. Siltation problems in drainage ditches and elsewhere will be greatly reduced. Roads, railroads, and other public facilities will be better protected from damage by flooding. And, perhaps most important to the area, the tax base (the land) will be much better protected.

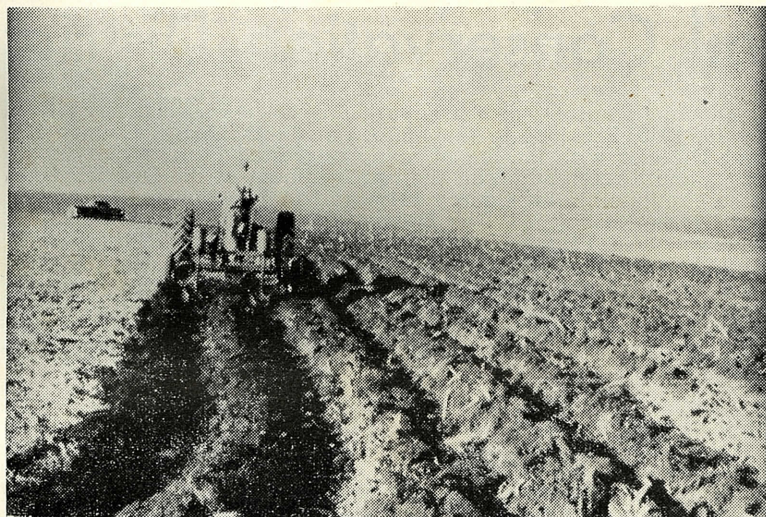
The first watershed to receive treatment under this program was completed in 1947. Since then some 30 such watersheds have been treated. Three of these are located in Ida County Soil Conservation District. Over 3,000 miles of terraces have been constructed by farmers. The government had aided with financing the construction of over 600 miles of basin terraces on the steeper slopes. Well over 400 dams have been constructed. 75-plus miles of channels have been improved. It has taken approximately 7,000,000 cubic yards of earthwork to build these dams, diversions, etc.

In all, some 150 watershed groups of farmers have been organized to expedite the Little Sioux program. Work plans are now being prepared for the next eight watersheds in line for assistance.

Area IA-1 has two of the pilot watershed projects in the Floyd River Valley. These are in the Plymouth and Sioux Soil Conservation Districts. Within the past three years a new watershed program has come into being. It is known as the Public Law 566 watershed protection program. Program objectives and general procedures are about the same in all these watershed authorities. The "566" program is nationwide and not limited, such as the Little Sioux program is. Within Area IA-1, five watersheds have been organized to participate in the "566" program. Three have submitted applications for aid to the State Soil Conservation Committee of Iowa. The Battle Creek-Davis watershed in Monona and the Held watershed in Plymouth have been approved for assistance. The third application has not been acted upon yet.

Soil conservation is on the increase in Area IA-1. Some 4,700 farmers are now cooperating with the seven Districts, which include Lyon County, Sioux County, Plymouth County, Cherokee County, Woodbury County, and Monona County Soil Conservation Districts in addition to the Ida District. Over 600 miles of standard terraces, ap-

Contour Listing



Contour listing on the Jay Bower farm, in Garfield Township. This practice is twice as effective as contour surface planting.

proximately 150 miles of basin terraces and some 450 acres of grassed waterways were installed in 1958. The farmers have also installed many drainage jobs and erosion control structures.

Farmers are getting some much needed help in the way of cost sharing from the Agricultural Conservation Program. The Extension Service and other organizations have played an important part. There is still much need for more information and education work. But many people are helping. For instance, the Sioux City Chamber of Commerce and the Sioux City Journal jointly sponsor a permanent agriculture program each year. Machinery establishments have funds and helped with conservation events many times. Several schools are teaching soil conservation. Ministers have frequently included soil conservation references in their sermons.

While much remains to be done, the people of Area IA-1 and Siouxland can be rightfully proud of the conservation work they have accomplished in the past 18 to 20 years. We of the Soil Conservation Service are the first to recognize that conservation accomplishments of this kind are the result of teamwork. In this movement, District Commissioners are the leaders. Area IA-1 is fortunate to have hard working District Commissioners who take their job seriously, and who are ready and willing to assume responsibilities and take actions whenever there is a need. The retired commissioners in this area deserve a special vote of thanks, also. Many of them have given twelve years or more service to their Soil Conservation District. Siouxland agriculture is developing fast.

The people in Siouxland have learned the value of soil and water conservation. Irrigation is now getting a start. With improved management of the soil and with some control on water

for crop production, the deep loess soils of this area adequately protected against erosion are among the most highly productive to be found anywhere.

—o—
"The plain truth is that Americans, as a people, have never learned to love the land and regard it as an enduring resource. They have seen it only as a field for exploitation and a source of immediate financial return"

Dr. Hugh H. Bennett

IOWA SOIL AND WATER

An Eleventh Commandment

"Thou shalt inherit the Holy Earth as a faithful steward, conserving its resources and productivity from generation to generation. Thou shalt safeguard thy fields from soil erosion, thy living waters from drying up, thy forests from desolation, and protect thy hills from overgrazing by thy herds, that thy descendants may have abundance forever. If any shall fail in this stewardship of the land, thy fruitful fields shall become sterile, stony ground and wasting gullies, and thy descendants shall decrease and live in poverty or perish from off the face of the earth."

—Walter Clay Lowdermilk

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The Original Collapsible Farrowing Crate

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24"x72"x36" for gilts

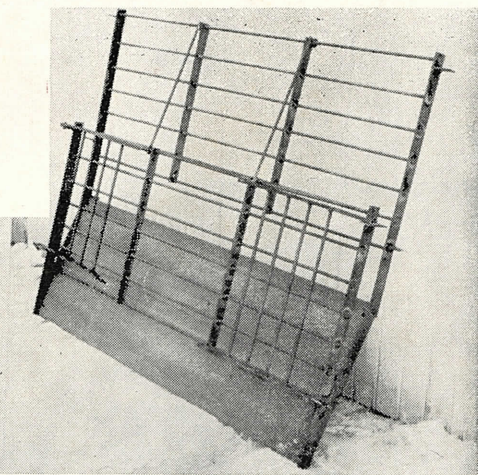
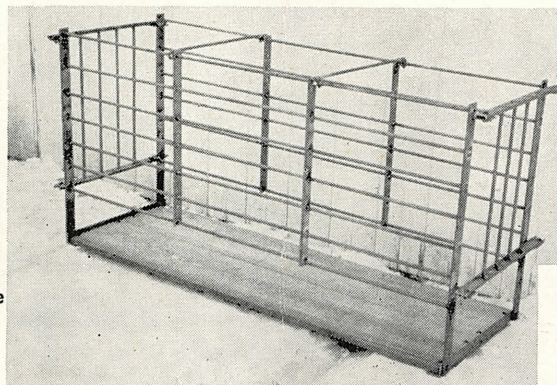
28"x72"x36" for sows up to 650 lbs.

▸ Absolutely rigid when set up

▸ Opens on both ends

▸ Sturdy 1"x12" floor

▸ Can store ten of these crates in the space needed for one ordinary crate



The sides and ends are constructed of 1/2" rod through 1 1/2" channel and all joints are welded.

If any sow breaks a Jim Dandy Farrowing Crate within one year from date of purchase, we will replace it free of charge.

This is What Our Users Say About The Farrowing Crate:

"From our brief experience Jim Dandy farrowing crates are very satisfactory. The first 3 sows saved 34 pigs while one not in a crate lost 3 pigs the first half day."

Stanley Baxter, Galva, Iowa

"I have used Jim Dandy farrowing crates for three years and I find them satisfactory. I believe they will pay for themselves in a very short time."

Ralph Speakman, Galva, Iowa

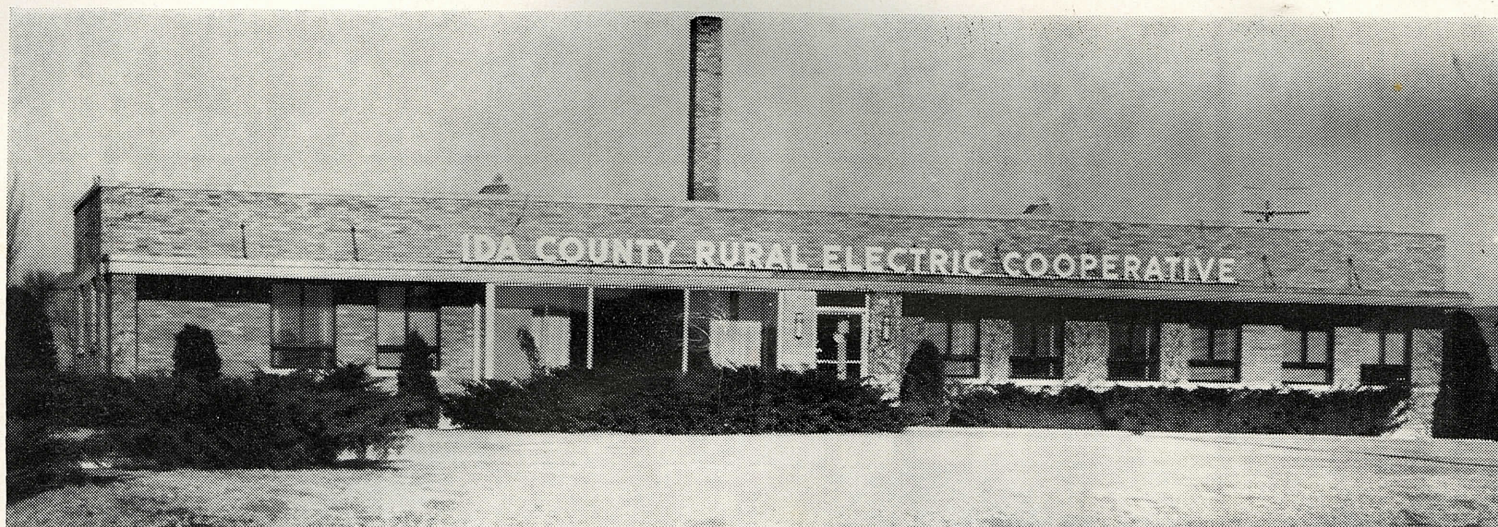
"We have used the Jim Dandy farrowing crates for three years and find them very satisfactory and profitable, because the sows are very quiet and content in these crates, also will save more pigs."

B. G. Collin, Galva, Iowa

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Small Boy: "Why are you planting that apple tree, Grandpa, when you will never be able to eat the apples?"

Grandpa: "Someone once planted an apple tree for me, son!"

... Each generation inherits "carried over" benefits from the constructive efforts of the preceeding generation. Surely no land owner or tenant farmer can conscientiously misuse or deplete our God given soils.

Let it be our resolution, as stewards of the soil, to leave our children with improved farm land with which they can meet the increased food needs of their generation.

FARMER'S CO-OP OIL ASSOCIATION

Galva

Correctionville

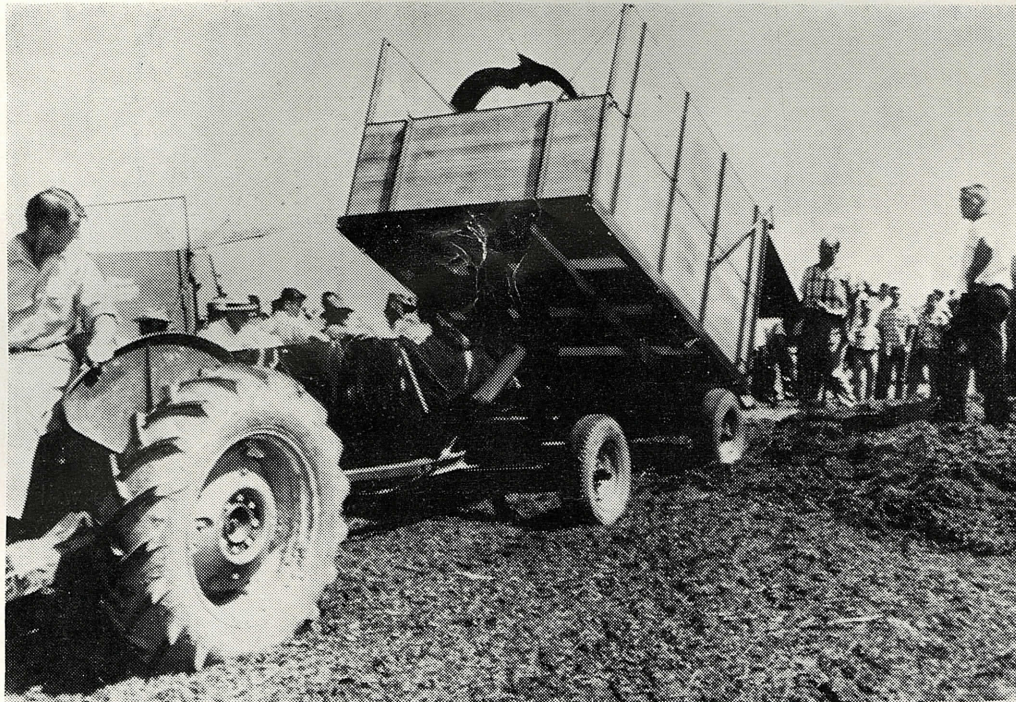
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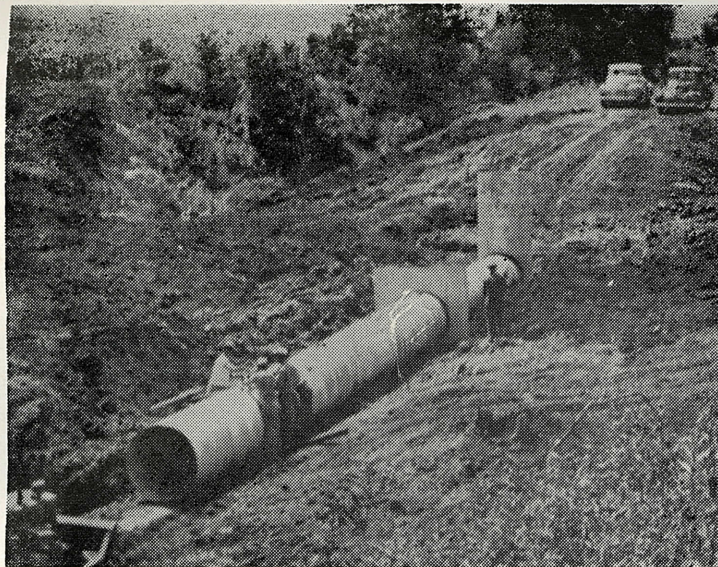
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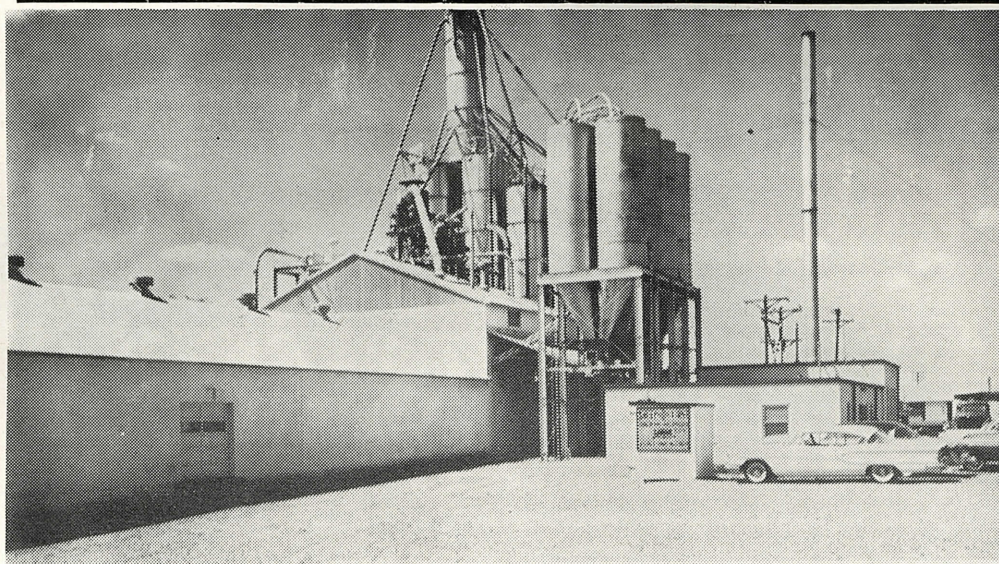
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All food produced in the U.S.A. must come from the soil. The productivity of our soil in the future depends on our action today. Every American, regardless of occupation, age or opinion either directly or indirectly depends upon soil conservation. If we conserve our soil today, we are insuring a good tomorrow.

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ESSAY

BETTER LIVING THROUGH CONSERVATION

The Place of Wildlife in
Conservation and Better Living
By Pamela Ann Keil
Lakota, Iowa
Conservation Pledge

I give my pledge as an American to save and faithfully to defend from waste the natural resources of my country—its soil and minerals, its forests, waters, and wildlife.

"Everyone talks about the weather, and nobody does anything about it," Mark Twain once said. This could be true of conservation not too long ago. People talked about the waste of forests, minerals, soil, water, and wildlife, but went blithely on, using them without any thoughts of replacement, or saving them. However, within the last decade, big steps have been taken to do something about this thoughtless waste.

Three hundred years ago this country was a great wilderness. Birds, mammals, and fish were plentiful. Buffalo roamed the plains and formed big-game herds. There were approximately sixty million of them, now there are only a few small herds. The National Geographic society reported that seventy-three mammals have become extinct since 1800. At least one hundred six

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different mammals have become extinct in the last two thousand years.

Maybe you have heard of the passenger pigeon. It is now extinct. Their flights sometimes clouded the sky. They nested in great trees, sometimes there were fifty nests in one tree. They are gone because of the disappearance of the great unbroken forests. If reforestation had come earlier, perhaps this bird would be here today.

The Whooping Crane, too, is almost extinct. There are only thirty-odd remaining. These beautiful white birds live in wooded-marsh areas.

Farm borders seeded in grasses and legumes provide an undisturbed nesting cover for ring-necked pheasants, and other ground birds.

Men have discovered that windbreaks provide food and cover for many kinds of wildlife. They are the favorite nesting place of the mourning dove. The windbreaks are usually placed on the north and west sides of a farmstead.

Hedges can be extremely beneficial in conserving wildlife. Hedges provide travel lanes for many kinds of wildlife, homes for birds, and small mammals. Hedges made of multiflora rose are outstanding for use in fence rows. Osage orange hedges were the solution in many places. If multiflora rose cannot be grown,

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Mr. and Mrs. Bruce Bye



Mr. and Mrs. Harland Hanson



Left to right: Elfrieda Mighell, Lorraine Pruehs, Lyle Munz, Ida Sanders, Lowell Pattison, Peggy Still, Judee Wilson, Esther Williams.

SPECIALISTS IN PUBLICATION WORK
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ALL TYPES OF COMMERCIAL PRINTING

STRIP CROPPING



In some instances strip cropping can be effective erosion control. Here it is on the Brueck farm, Garfield Township.

Grassed Waterways



Grassed waterway on the Hartley farm, northeast of Ida Grove. There is no ditch to turn around for here.

ESSAY

BETTER LIVING THROUGH CONSERVATION

How Conservation Affects My Future

By Edwin Hoffman

Mt. Ayr, Iowa

For years it was thought that the soil was inexhaustible but we have now found out that the soil needs more building. Few virgin soils remain. Our soil is our heritage to be passed on to the next generation better than when it came to us. America's future depends on the progress of the soil and that progress is in our trust. More than fifty million acres of once fertile soil can no longer be used for production of cultivated crops. Another fifty million acres have lost fifty per cent of their good top soil. Iowa has one-fourth of the grade A land in the United States, but seventy-six per cent of this land needs conservation practices.

We are going to have to start thinking about something other than trying to beat the Russians to the moon with a rocket. We are trying to get more people interested in rockets and satellites than we can spare. There is just as much need for people to take an interest in protecting our soil. We are going to need more food before we can accomplish anything and the only way to produce more food is through conservation.

Our population is increasing on the average of five people a minute, seven thousand two hundred each day which means we will have about two hundred million people in the United States by nineteen seventy-five. We are going to need better soil, for our

growing population is going to need a lot more food in a few years than we can supply now. We have an average of nine acres of land per person in the United States, but we are having a decrease in land per person every day because of our rapidly growing population.

Control of erosion is a major problem in our nation's worries. The Mississippi alone empties about seven hundred and thirty million tons of soil into the Gulf of Mexico in one year, an amount equal to enough soil to fill wagons which would reach around the earth twenty-three times. We are going to need more grass, waterways, terraces and do more contour plowing and planting. We are also going to have to use crop rotation to keep from using all of one nutrient in the soil. It takes more than one's lifetime to build up one inch of soil which can be easily washed away in one little rain.

We are going to have a better living through conservation when we produce more and better corn for our pigs and cattle, for with the population problem mentioned before we are going to need more meat. Hogs are going to market in less time today than previously but we are still going to have to send them faster before long. We are going to need more feed for dairy cows for better production of milk that we are going to need in the future. In all we are going to need more food for people, animals and all plant life.

Since our land was put to plow, we have lost about half of our good top soil. The reason for this is man has destroyed nature's protective covering by plowing the land and cutting down forests exposing the soil to the full forces of water and wind.

For a hundred acre corn yield you need approximately eighty-six pounds of nitrogen, thirty-five pounds of phosphorous and twenty-two pounds of potassium. While we are using the above amount needed in nitrogen and potassium we are not using enough phosphorous to make up for what it takes out of the soil. When an animal eats a plant it eats nutrients that have been taken from the soil by the plant, but about one-fourth of the nutrients stay in the animal which means the other three-fourths goes into manure. So if a farmer spreads manure he will be giving the soil back most of its nutrients. I quote from the Bible: "The Lord hath created medicines out of the earth." Feeding antibiotics to an animal is the same as applying commercial fertilizer to soil. This is a dangerous as well as an artificial practice.

Another type of conservation is the conservation of wild life. We should try to conserve a lot of insect eating birds for they will help to keep insects from eating our crops, eventually destroying them. If we keep insects from getting to our crops I feel we will see the difference in our crops in just one or two years.

A better living through conservation will result in better farm value, average value of land per acre, size of farm, crop yields per acre and better high school and college educations. We are going to have more money in our pockets and be able to enjoy some of the finer things of life. If we do not take a step forward toward conservation we are going to be living in a land of poverty.

Conservation is a good way of saying a proper using and saving of the soil means a more prosperous way of living.

My future depends on Conservation because I have an interest

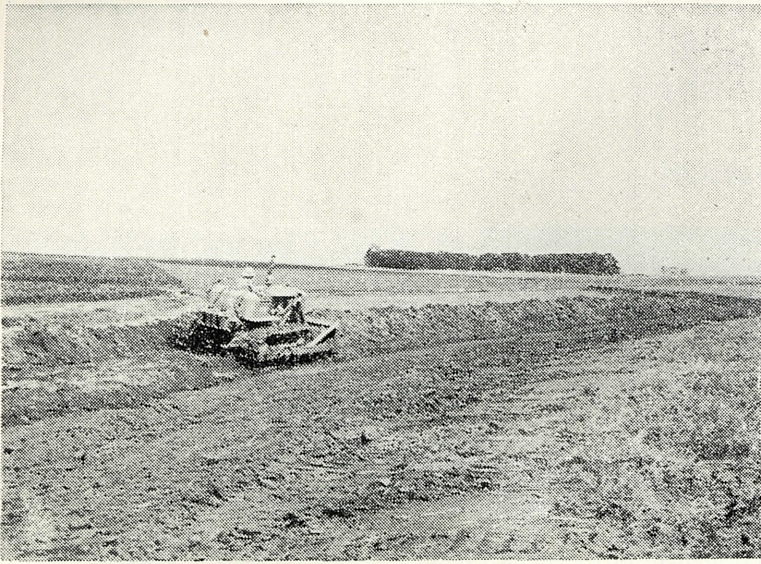
in farming and might take that up as my life work. Conservation will be the difference in how good or how bad a farmer I will be. The facts mentioned before about the conservation program will make me set a goal for myself in agriculture.

—o—

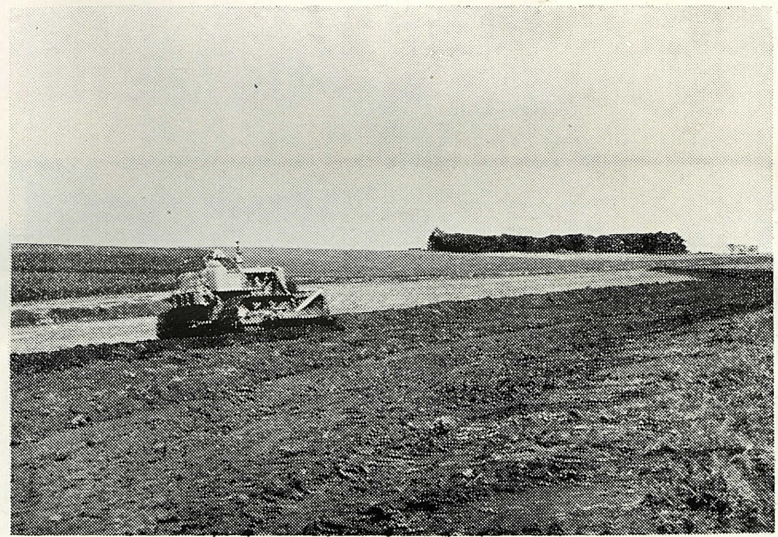
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wish to
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for sponsoring
this issue
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Your help was
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**The
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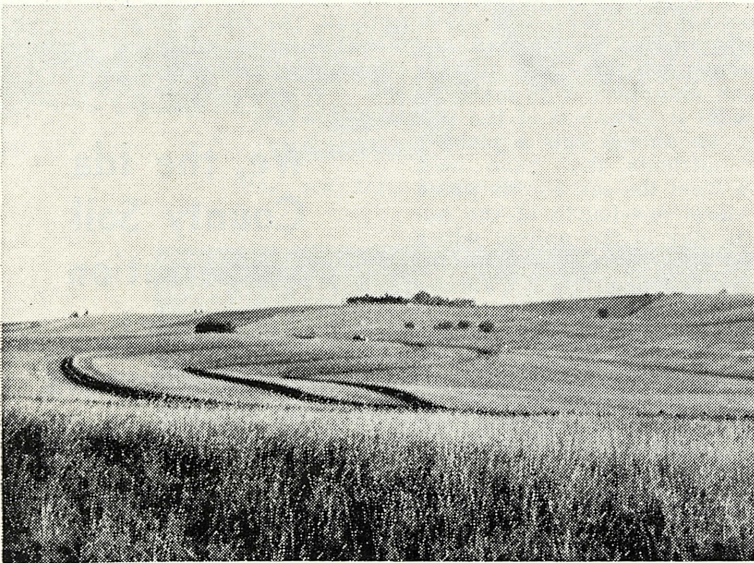
Terraces for Soil and



Terraces under construction on the E. H. Clausen farm, Griggs Township.



The finished terrace on the E. H. Clausen farm, Griggs Township.



Terraces protecting a long slope on the Henry Brueck farm, Maple Township.



The water in these terraces caused no floods on farms down stream.

TERRACES

By Charles P. Bodholdt
Conservation Aid

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Constructing level or basin terraces to detain or control the flow of water and check soil erosion on sloping land. Level terraces generally are constructed on sloping cropland areas and on slopes of 20 per cent or less. Basin terraces are installed on slopes generally in excess of 20 per cent, and below areas devoted to permanent vegetation. Level terraces will have a channel cross section which will hold two inches of runoff.

Terrace outlets will be left in sod to prevent eroding by runoff of water, or the ends will be closed to hold the two-inch runoff. The ends of basin terraces will be built in the same way.

IOWA SOIL AND WATER

Water Erosion Control



Terraces on the Louis Smith farm, Maple Township. This water would have been lost for crops if the terrace had not been here.



A terrace that works on the Henry Brueck farm, Garfield Township. This terrace controls erosion and helps to prevent floods.

Establishment of permanent vegetation cover on all basin terraces is required in order to be eligible for cost sharing. The construction of diversion terraces, is a practice used to intercept runoff and divert excess water. Proper outlet must be provided. Natural or constructed vegetated, or properly designed permanent waterways will be installed before the diversion terrace is constructed.

far as possible, to come in the terrace channel. Don't plow the terrace ridge too high. The back slope will become too steep and reduce the formability of the terrace.

Save the thin layer of soil in which your living is rooted

What Terraces Will Do For You

In Ida County the term "terrace" has become identified with a gently sloping hillside channel, or level ridge constructed around the hill, on the level, for controlling the runoff of surface water, and over which farm machinery may be operated. This is what a good terrace system can do for you:

1. Reduce soil losses by 95 per cent, compared with up and down hill farming.
2. Reduce water losses. Level terraces keeps almost all the water in the field. Graded terraces to a lesser extent, reduce water losses.
3. Provide permanent "guide lines" for contour farming.
4. Permit a greater proportion for row crops on sloping land.
5. Increase crop production and total farm income.

Maintain Terrace With Your Plow

Farming operations and silting in the terrace channel will reduce the effective heights of the ridge. With the channel capacity thus reduced, heavy rains frequently cause overtopping and breaks in the terrace ridge.

Terraces can be maintained by plowing. Lay the opening or back furrows on top of the terrace ridge. Allow the open furrow, so

IOWA SOIL AND WATER

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AUDUBON DISTRICT HOLDS ANNUAL MEETING

Recently your editor had the privilege of attending the Audubon Soil Conservation District's annual meeting in Hamlin, Iowa.

A wonderful meal (of which I ate too heartily), was served by the wives of the Soil Conservation Personnel.

After the meal a demonstration on the value of Conservation Practices to prevent Soil and Water loss, was presented by a member of the Audubon 4-H club.

Harvey Sorensen, chairman of the commissioners then entertained the group, showing slides taken on some of his trips around the United States. We also enjoyed the narration given by Harvey as he showed the slides.

Mr. and Mrs. Dick Prestemon and Mr. and Mrs. Bill Greiner of the State Committee also attended and enjoyed the evening very much, I'm sure, as your editor certainly did.

SAC DISTRICT NEWS

By Ralph E. Dewey
Work Unit Conservationist

This time of the year is a time for reflection on the good things of life that happen to us all. We take one special day to praise God for his abundant gifts, while the remainder of the year we are very likely to be taking credit ourselves for this prosperity.

"I raised 110 bushels of corn per acre this year." "Our brand

of fertilizer boosted crop yields by 25%—" "Z-brand of mineral put my hogs on the market six weeks earlier." "Maybe we'd better hire those rainmakers to come back again next year."

It seems we forget who's in charge about the time we set foot outside the church. Christian Stewardship—soil stewardship is fine and noble to talk of, but let the preacher do the talking.

Who, but the man who tills the land can bear the responsibility of stewardship of the soil? Who, but God, can be a partner with the tiller of the soil?

We speak of stewardship—of tithing. Give one-tenth of our earnings to the Lord. Why not, then, return one-tenth of our "take" from the soil to the Lord's land.

The farmer has only a short term lease on the land he farms. He thinks of it in terms of a lifetime, but in a glance to the future, our lifetime is a mere flash.

While we are around for that flash, are are responsible for how we handle this valuable property we have leased to us. We can leave one of two monuments.

We can go the way of early civilization—exploiting and mining all the good out of the soil. We can leave, then, a monument of canyon-size gullies, silt-laden streams and barren hills.

Or we can accept the challenge of responsibility as stewards—take good care of our land. We

may then leave a monument of good, deep, fertile soils, well protected from erosion with terraces, grassland and contouring. We can leave the future generations a permanent agriculture for which they may be giving thanks on some future Thanksgiving Day.

WATERSHED ACTIVITIES

By Frank Mendell
State Conservationist

The Watershed Protection program established under Public Law 566 has entered the construction phase in Iowa. The Harmony Creek Watershed Project, in the Harrison County Soil Conservation District, is no longer a dream or something to wonder about. The works of improvement, including eight structures, are completed. Two of the structures are on county roads. The other six are on private land and some are full or partially filled with water.

The sponsoring and contracting organization consisted of the Harrison County Soil Conservation District Commissioners and the Harrison County Board of Supervisors. The assurance that the pond areas and structures will be properly maintained also became a reality. A petition by the watershed group to become a sub-district of the Harrison County Soil Conservation District has been filed and approved. Three trustees, who live within the sub-district of Harmony Creek Wa-

tershed, have been appointed to assist with the administration of the maintenance program. The County Board of Supervisors will maintain those structures on their road right-of-way.

In Rocky Branch Creek Watershed, located in the Jefferson County Soil Conservation District, a contract for the construction of five structures has been completed. The remaining sixteen structures are scheduled for completion during 1959 and 1960. The Jefferson County Soil Conservation District is the local sponsoring agency and also acts as the contracting organization.

The Simpson Creek Watershed with the Fremont County District Commissioners acting as the sponsoring and contracting organization, has five structures under contract and should be complete by July 30, 1959.

Sub-districts have also been formed in the Rocky Branch and Simpson Creek Watersheds for the purpose of maintaining the structures on farm lands. Structures located on the highway will be maintained by the Highway Department.

In addition to the structures in Harmony Creek, Rocky Branch Creek, and Simpson Creek Watersheds, 28 structures have been approved for construction in the Crooked Creek Watershed which is located in Cass, Audubon, and Guthrie County Soil Conservation Districts.



**BE KIND
TO
YOUR
LAND!**

It's your greatest asset. Buildings can be replaced; so can worn-out machinery. But what can you do with land when its fertility has been destroyed?

Crop rotation, contour cultivation for erosion control, and similar modern methods of promoting farm prosperity are very important. This bank is strongly in favor of making safe loans, giving advice, or doing anything that contributes to the permanent welfare of our farmer friends.

**ARTHUR TRUST
&
SAVINGS BANK**



Arthur, Iowa

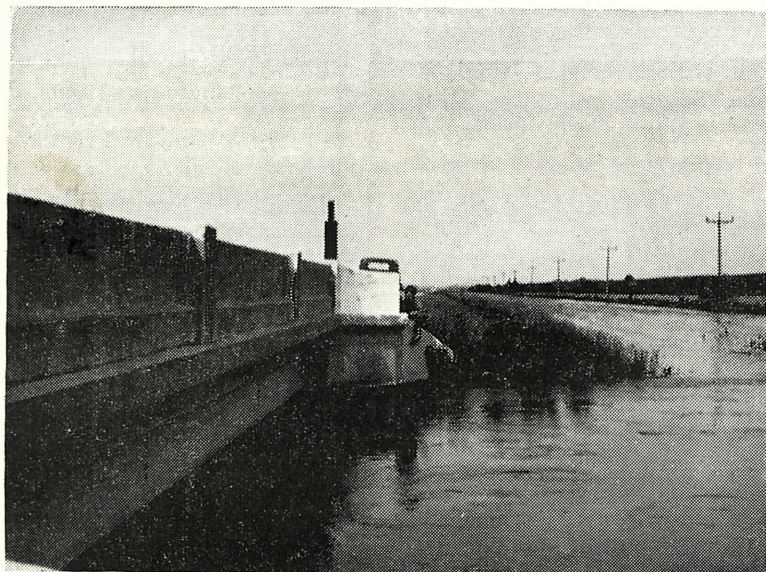
Prevent Floods With Upland Conservation



1954 flood west of Ida Grove. This water will never grow a crop.



Bruce Marcue inspects flood damage on the Maple River east of Battle Creek.



Highway 175 bridge west of Ida Grove. The best soil in the world on its way to the Gulf of Mexico.

BETTER LIVING THROUGH CONSERVATION

Whose Responsibility Is
Soil Conservation?
Darrell Goodhue
Carlisle, Iowa

Today as we turn on the radio or television set we are greeted with fears of atomic and hydrogen bombs, guided missiles and other disastrous implements of war which could destroy our nation. We are constantly reminded that we are faced with an enemy whose ultimate goal is to control the world, and it is our duty to defend our nation and the free world. We are constantly reminded that we are behind in missile development, in the space race and in the educating of our youth to become engineers and scientists. Certainly these fears are not without reason and our meeting these deficiencies is important. But we often tend to for-

get that food and fiber has time and time again become the deciding factor in wars. It is quite doubtful that we could have

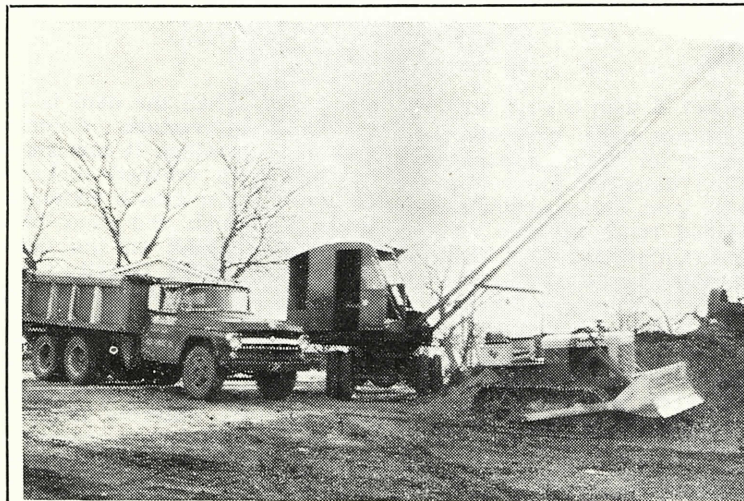
gained our independence in 1776, won World War I or World War II without superiority in agricultural production. Today it is reasoned that if we have another war it will be a quick war and won't be a long economic struggle in which food and fiber play an important part. With our present surpluses some people, and possibly most people, regard better farming methods as a means of eventually making our surplus greater and farm income lower.

In the future I believe that our surplus production of food and fiber will play an important part in the cold war in which we are now engaged. The enemy we are presently facing seeks not only to conquer the world through military domination, but presents an alternative type of economy to our own. This fact, coupled with the fear of total destruction if war was to occur, has actually put us into a cold war or a war of economies and production. In the field of agricultural produc-

tion our enemy is far inferior to us, both in quantity and quality. When one-half of the world's population goes to bed hungry every night, it is reasonable to assume that our production of food and fiber will become increasingly important to the people of the free world. The question is, will we be able to meet this ever increasing and important demand for agricultural goods.

Our capacity of production has been increasing at a faster rate than our population. We have made phenomenal increases in the production of basic crops due to fertilizers and better cultivation methods. Our "feed to meat" conversion ratio has increased to an almost unbelievable degree due to antibiotics, minerals, vitamins and protein additions. Our output per man hour has advanced to a once thought unobtainable level. But with all of this efficiency in production and labor we have achieved, we still

—Continued on page 31



Marvin Rath

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IDA GROVE, IOWA

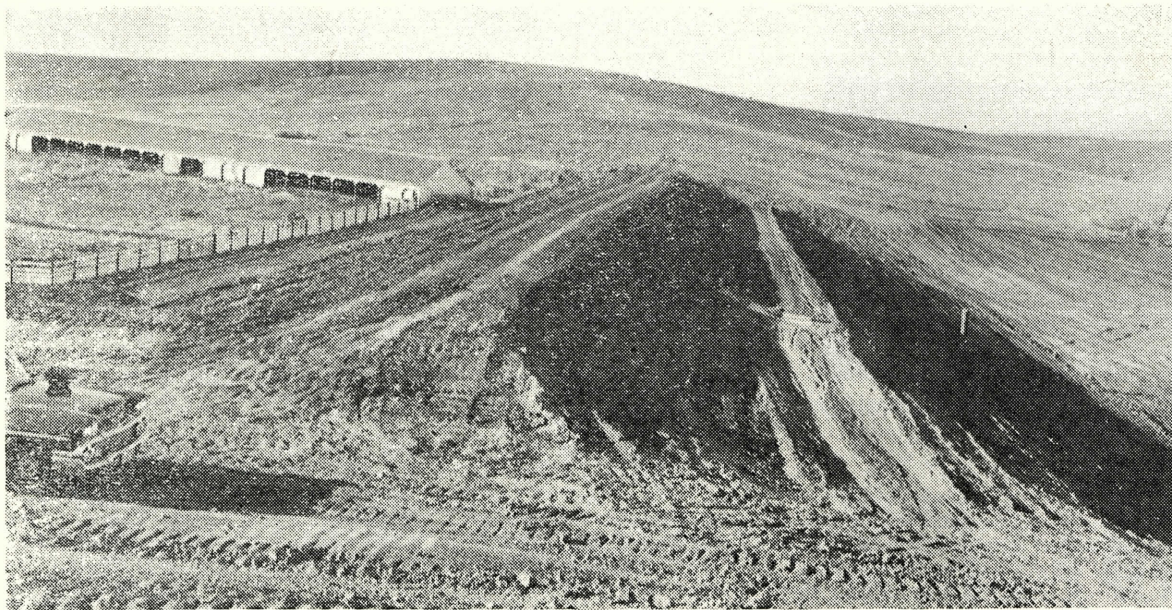
Farm Ponds For Erosion Control



Kenneth Burnett and Fred Grell looking over the site for an earth dam. The stakes in the foreground are at the far end of the fill shown in the accompanying picture.



Earl Mickelson and son standing on fill of new dam on the "No View" farm north of Battle Creek, Iowa.



Earth dam at the Fred Grell farm, in Corwin Township. A filter system has been installed and water piped to the feed yards shown on the left.

DAMS AND FARM PONDS

By George W. Witters
Conservation Aid

New frontiers in farm lands are gone. We must take an inventory of the natural resources we now possess, and take steps to protect and improve them.

If you have a watershed on your farm which discharges water faster than the waterway can handle it, you undoubtedly have a deep, ugly ditch. Some of these ditches if not too big, can be constructed into waterways. Others will require a mechanical means

of control. A dam is your answer.

Dams are used as retention reservoirs for future use of water, and detention reservoirs to protect land farther down the watershed route in time of excessive rainfall. Dams go hand in hand with better conservation practices. Terraces, good rotation, and contouring should be practiced in the watershed above dams in order to keep fertile topsoil in place. Keeping silt out of the ponding area will lengthen the usefulness of the structure.

Retention reservoirs are usually called livestock watering

structures. When the dam is being built a livestock watering system is installed. It consists of a riser (with crushed rock) to filter the water into a waterpipe leading through the dam to a stock water tank on the down hill side of the fill. Gravity is the principle on which the system operates. The ponding area should be fenced. This will help guarantee a supply of fresh, clean water, and hold down disease. The livestock watering structure is also beneficial in a crop rotation. It permits livestock to graze land which is often a long way from the buildings and water.

Detention reservoirs are known as erosion control structures. These structures do not have livestock watering systems but often are used for watering purposes. Erosion control structures are used to control and stabilize large gullies.

Ponding areas and dams should be fenced to protect the vegetation on the fill and protect the vegetation along the water's edge from trampling. Wild life plantings of multiflora rose, evergreens and hardwood trees enhance the beauty of the area as well as increase the valuation of your property.

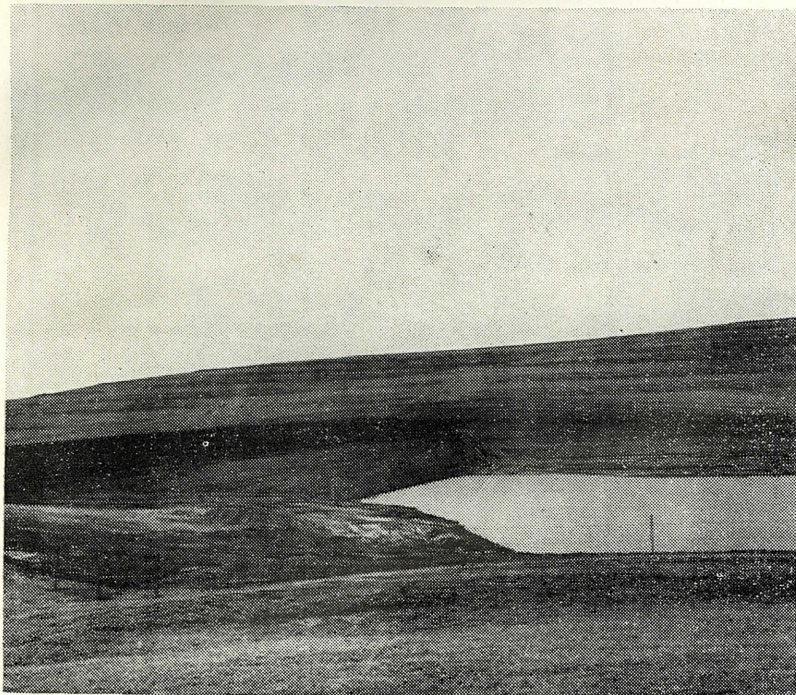
All farm dams and their ponding areas offer a wide variety of recreation. Fishing is one of the most enjoyed sports. Ponds may be stocked as soon as there is an adequate supply of water to support fish. Stocking can be done by the individual owner of the State Conservation Commission and U. S. Fish and Wildlife Service. Bass and bluegills are the species of fish most commonly used. In three years you should have fish the most ardent fisherman will find rewarding.

When fall frost begins to show, you often see the hunter, with a bag of decoys over his shoulder, heading for the nearest farm pond to bag a brace of ducks or get an odd goose.

Family recreation is the most rewarding. On a hot summer day get the family together with a picnic lunch, bathing suits and head for the previously landscaped ponding area for an outing.

IOWA SOIL AND WATER

and Livestock Water



Picture shows newly constructed dam on the Bryce Vollmar farm.

Farm ponds are becoming an increasing practice on conservation farms. With the watershed above under control by conservation practices and built according to specifications, dams are eligible for cost sharing through your A.C.P. program. Your Ida County Soil Conservation District will be glad to supply any further information, and give you assistance you may need to install a dam on your farm.

the situation. After a few years he thought he had found the answer and assumed soil conservation practices would soon be used throughout the new country.

Washington might have thought the problem was solved, but a lot of water has gone under the bridge since then, and most of it has been silt laden.

Today we, like Washington, think we have the problem solved, but according to the Soil Conservation Service enough soil is eroded from American lands, that if it were put on railroad cars, it would form a train that would encircle the Earth not once, but eighteen times.

The problem isn't a result of a lack of knowledge about soil conservation methods, but rather the attitude that we don't need to conserve our soil any longer, that soil conservation is a worn out phrase and not a problem of today. In reply to this, our rivers are still muddy, floods still threaten and our dams still fill up with sediment. To believe that we have conquered the problem of soil erosion is actually a failure to meet realities.

As our production of agricultural goods becomes necessary to the welfare of the world we realize that the conserving of our soil is becoming an increasingly important responsibility. It is a responsibility we are shirking and trying to hide from. It is not the responsibility of the farmer alone, the county agent alone or any other single group. The necessity of continued high level

farm production makes soil conservation the responsibility of the businessman, professional man, politician, laborer, as well as the farmer and the county agent. Soil conservation is a part of our defense, just as guided missiles and H-bombs and deserves the attention of everyone.

IN APPRECIATION

To all the people of Ida County, in behalf of your District Commissioners and the Soil Conservation Service personnel, I want to express our appreciation of your acceptance of our efforts to feature Ida County in the Soil and Water Magazine. In this way you again have proven that the Soil and Water of the land is not ours to waste. Everyone must be good Stewards of our God-given abundance or our prosperity will leave us. God does not intend that we should be neglectful of our natural resources. The way the land goes so goes the nation.

Conservation it not inherited, it is something we must work at.

Your Assistant Editor

With the right to use goes the duty to conserve.

ESSAY—

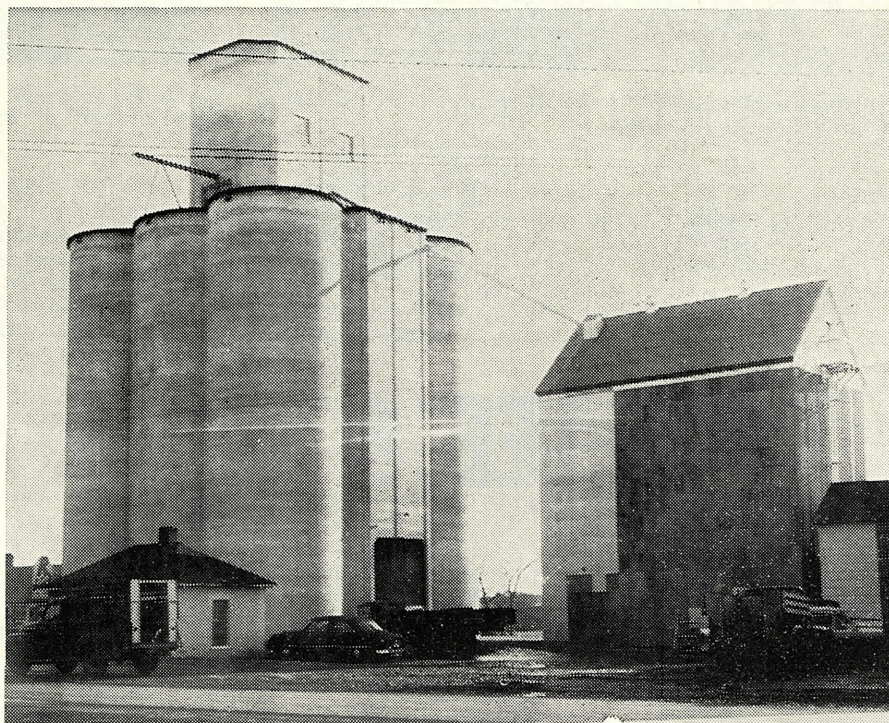
(Continued from page 29)

cannot produce agricultural goods without the use of soil. America has been blessed with fertile lands which have been able to create the highest level of living in the world. Through our rich soil we have been able to produce the abundance of food and fiber so essential to the establishment of a high standard of living and a stable economy. But will our soil be able to meet the increased demands placed upon it brought about by a growing population and the supplying of an ever increasing percentage of the world's population?

The depletion of our nations soil could easily spell out loss to our Western World in this day of an economic cold war. The common thought today is that through different programs of the federal government and farmer cooperation the soil erosion problem is well under hand. We have the attitude that we are conserving our soil to the best of our ability. About two hundred years ago George Washington realized that we were depleting our soils and sought to correct

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