

S OIL and WATER



IOWA



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



MARCH
1956

Iowa Soil and Water Spotlights Wapello
and Davis Soil Districts

(See Spotlight Stories, Pages 3 and 5)

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Merle Travis, President, Iowa Association of Soil Conservation District Commissioners Inc., Bedford, Iowa

Barr Keshlear, President, Iowa State Watershed Association, Shenandoah, Iowa

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BARR KESHLEAR, 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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IOWA SOIL AND WATER

The Cover



Southeastern Iowa possesses a bountiful repast of variegated natural beauty in its woodlands, fields, meadows and lakes. This month's cover captures part of this panorama of nature in this scene of Lake Fisher, which not only is a thing of beauty, but also serves as the Bloomfield city water supply.

Editorial

A CLEAR ROAD AHEAD
By Clay Barnett
Work Unit Conservationist
With the SCS

Since the establishment of the Davis Soil Conservation District in 1944, the land values of the county have been materially raised. At no time in the history of the county has a greater number of outside land buyers visited and actually bought land. According to the statements of these buyers, the progress in the county, in the last few years, in general appearance of buildings, roads and other improvements are self evident.

Average yields of all crops including pasture are higher, especially on high conservation farms.

While we have many good cattle herds, both beef and dairy, which win their share of blue ribbons, and utilize our pasture, we lead the state in sheep and wool production.

The land use adjustments necessary to reach much higher goals must be made. Through the continuous close cooperation of all farmers, groups and agencies, this will gradually take place.

One of our greatest adjustments must be made between pasture and crop land. The proper and adequate use of our cutover timber land that is now being improperly used is slowly being made. We feel that this will come hand in hand with the prospective uses and markets for timber products now being developed.

No other practice has helped Davis county agriculture more than the application of agriculture limestone and the growing of deep-rooted legumes and grasses. Combine this with soil and water conservation practices, livestock, and management and you have a clear road ahead.

IOWA SOIL AND WATER

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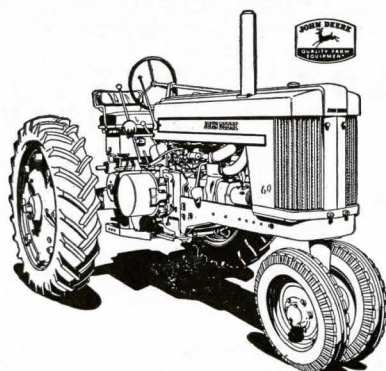
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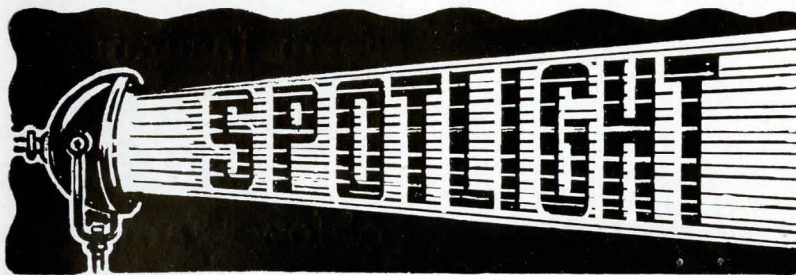
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The Wapello Soil Conservation District was the thirteenth in the state to become organized. We have come a long way since 1941, but also recognize that we have a lot longer way to go on carrying out our district's soil and water conservation program.

For the benefit of those who may not be too familiar with Wapello County, a few brief facts may be in order. The southern and southeastern portions of the county are typically rolling to steep timberland soils, with a few broad and level prairie ridges spreading out between several major creeks. Timberlands and open pastures predominate.

The Des Moines River cuts the county diagonally from northwest to southeast. In the northern and northwestern areas, the land is generally more suited to intensive agriculture, being made up largely of level to gently sloping prairie soils with a few tree-lined creeks piercing these rolling plains. Fairly intensive operations in corn-hogs and feeder cattle are carried on in this area.

General diversified grain livestock farming is county-wide, with quite a few dairy enterprises well scattered. The river bottom, being subject to floods, is treated mostly on a cash grain basis. The city of Ottumwa has been a factor in influencing the number of small-sized part-time farms in the immediate vicinity.

Soil erosion and water prob-

(Continued on Page 7)



Commissioner Leo Glentzer, member of Wapello Soil Conservation District.

LEO GLENTZER

Leo owns and operates the 154 acres five miles west of Ottumwa on Highway 34 on which he has spent his entire life. For many years he has rented an adjoining 147 acres.

Leo is the newest member of the District Commissioners, having been elected in August of 1955.

Leo has been an officer on the Farm Bureau board, president of the local school board, and is on the board of National Farm Loan Associations.

In addition to these community services and his farm and dairy enterprises, Leo has found time to establish sound soil conservation on his farm and encourage his neighbors to do likewise. Leo has built many thousands of feet of terraces for neighbors who were happy to secure his help and who respected his ability and "know-how."

(Continued on Page 19)



Commissioner Ed Klodt, treasurer of the Wapello Soil Conservation District.

ED KLODT

Ed Klodt is the kind of man who will give his time and pass up personal gain for public service; namely, to convince his fellowmen of the urgent need to save the soil, hold the water, and increase productivity.

Ed has served others by both his leadership in his own community and as a soils commissioner in his district. His first efforts at soil and water conservation were on his own farm in 1942, when he built two terraces on a rundown piece of land. A field trip was arranged in order that others might watch Ed build the terraces with his moldboard plow. In 1943 he invited his neighbors to a meeting in his home where the men learned the need of farm plans and community effort in conservation. As a result, the neighborhood is far ahead of most in their accomplishments.

Other field day activities have since been held on his farm at various times. On September 10, 1953 the state contour plowing match and soil conservation field day were held on his farm. Since then he has made still more improvements. An outstanding one is the new extra wide terraces he has built, which accommodate modern farm equipment.

He has one of the first farm plans in the district, dated 1943, covering the 305 acre farm on which he and his family live. The influence of the farm planner plainly shows: the pattern of his fields is irregular; the fences zig and zag with the contour; the cows no longer come home for water—they find it at the pond over in the pasture. Practically all his land is timber soil. Some is under a four-year rotation and some a five-year rotation. He has a well rounded

(Continued on Page 4)



Commissioner Lee Stephenson, chairman of the Wapello Soil Conservation District.

LEE STEPHENSON

Lee Stephenson has spent many years of his life in soil conservation work. Way back in the 1930's Lee was promoting soil conservation when he served as a member of the four-county Soil Improvement Association. At this time, many experiments in fertilizer, drainage, and hybrid seed corn were carried out on his farm. During this time the first experimental plots in the production of hybrid corn were carried out by him, the very first in Wapello County. He helped Wapello County become an organized Soil Conservation District in 1941, and has served as a commissioner continuously since that time. In the past fifteen years many changes have taken place in the District and many projects have been carried out.

In the meantime, he has made a very outstanding record of devotion and service to his community, his county, and state. Lee served as Director of the State Association of District Commissioners for the first eight years of its existence and one year as vice-president of this association, having served more years continuously than any other men. He also served three years as president of the Wapello County Farm Bureau. He was the first chairman of the old AAA in Wapello County and served three years on this county committee.

He has served seventeen years on the Community Committee since the farm program was first pioneered under his leadership. Lee has also served five years on the Board of Southern Iowa Electric Coop., Inc. (REA); four years as a director of the Iowa Farm Bureau Federation. Presently he is serving as a director on the Wapello County Fair Board, Chairman of Drainage

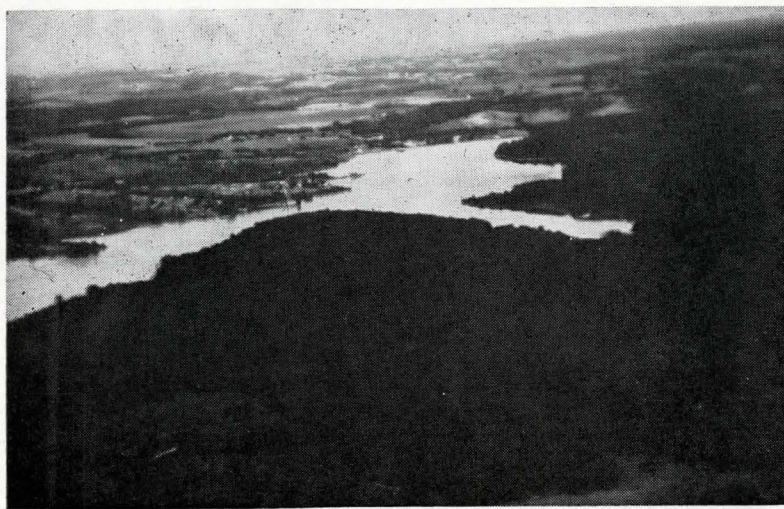
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Wapello Soil Conservation Office Staff



Left to right: George Gutmann, area engineer; **James McNelley,** state aid; **Lawrence Stout,** engineering aid; **Roy G. Brueland,** conservation aid; **Ruth Orman,** state clerk; and **William Espy,** farm planner.

Southeastern Iowa Abounds in Natural Beauty



Aerial view of Lake Wapello, a beautiful recreation area for all southern Iowa.

Conservation on the Land

Throughout 1955 a heavy amount of application work was stimulated by two factors. For one thing, there was an exceptionally long stretch of weather suitable for field work. But probably a more important incentive was the substantial amount of share-cost payments available through ASC, which enabled many farmers to complete practices which otherwise would have been neglected. But not all the practices were applied without forethought, as was shown by the fact that during the year thirty-five farmers received their basic farm plans, while twenty-two signed up as new cooperators. Following is a list of the practices which the Wapello Soil Conservation District, SCS technicians, and ASC have helped farmers apply:

Practices	Amounts Applied in 1955	Unit	Total Applied to Date in District
Contour Farming	1,061	ac.	19,463
Brush Control	3	ac.	495
Fence Row Improvement	80	rod	702
Hedgerow Planting	474	rod	5,110
Wildlife Area Improvement	2	ac.	28
Chutes and Flumes	3	no.	6
Weir Notch Dam	1	no.	16
Drop Inlet	1	no.	19
Land Smoothing	17	ac.	105
Pond	60	no.	307
Tile Drains	89,049	lf.	372,425
Diversion Construction	5.8	mi.	57.65
Open Drains	3.85	mi.	16.85
Farm Drainage	404	ac.	2,575
Terracing	34	mi.	185
Waterways	37.7	ac.	132

ED KLODT—

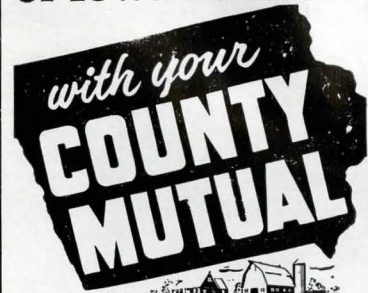
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livestock program with emphasis on dairying and hogs. His modern four-stall milking parlor increases efficiency in his dairy operation.

Not only did he show others the way by doing it himself, but he also has served as a commissioner. He was first elected in 1947 and re-elected in 1953 for another six year term. He has served as treasurer all nine years. Ed is also chairman of the County ASC committee. He started out as a township committeeman in 1934 and has been on ever since, becoming a county committeeman in 1946. As a program man on ASC he has staked out many terraces and ponds for others in the district. Ed is also a voting delegate of the Artificial Breeders' Association (Dairy Genetics) and is a member of the board of Wapello Dairies, Inc.

The Klodts have five children—four boys and one girl. Three of the boys and the girl are active in 4-H club work. The Klodts are also active in PTA at the Comstock School where their children attend. The oldest boy is a sophomore at Walsh High in Ottumwa. Mrs. Klodt is active in township and county Farm Bureau women's activities and is County Soil Conservation Women's chairman this year. The Klodts are keeping Farm and Home Management records of their farming operations conducted by the Extension Service. The family attends St. Mary's Catholic Church in Ottumwa, and Ed is an active member of the Knights of Columbus.

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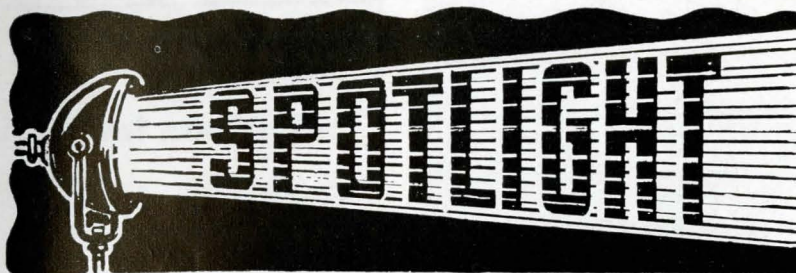
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AT YOUR SERVICE

Many services are available to the farm operator and owner which they are entitled to and are not taking advantage of.

For instance, we have frequent calls at the Soil Conservation District office for assistance in solving conservation problems, land use, pasture management, re-seeding, fertilizing, water supply, waterway seeding, gully control and land leveling, clearing, grading, terracing, diversions, and others which are included in the Agricultural Stabilization Committee (old AAA) Program for 1956. Incentive payments are being approved up to 50 or 60 per cent of their cost. These are permanent type improvements which add to the value of the land for the entire community or county.

Then, we also get other questions regarding insect control and also rodent control. When to apply and how. Fertilizer needs, how to take soil samples and what to do with them after the samples have been taken. What to plan, proven varieties of grass, legumes, grains, hegaries and even corn. What foreign seeds can we use and get satisfactory stands. What not to use. Weed and brush control with spray material, when to apply, how much, and effects on livestock, milk cows being milked for family use or sale or to meat animals. What is the outlook for 1956 for the Davis county farmer?

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SOIL CONSERVATION SERVICE AND STATE OFFICE STAFF



Left to right: Jack D. Chamberlain, Conservation Aid, Clay C. Barnett, Work Unit Conservationist, Eugene Francis, Conservation Aid, (back) LaVern Weilbrenner, Conservation Aid, and LoRetta Jarvis, State Clerk.

IOWA SOIL AND WATER



Commissioners Pearl Spilman, Harold Baughman, President, and Dale Blackwell, Treasurer, of the Davis District.

PEARL SPILMAN

Pearl Spilman and wife Sylvia, live in a beautiful new brick home on a hill, bordered on three sides by a white board fence, overlooking Chequest Creek bottom. Looking out the south picture window, you can see the Davis County Courthouse, the Bloomfield Water tower and the cars and trucks rolling over Highway 63 that runs between Bloomfield and Ottumwa, Iowa.

(Continued on Page 20)

HAROLD BAUGHMAN

The big, white, U-shaped barn on the bend of Highway 2, three miles east of Bloomfield, Iowa, is a landmark well-known to Southeast Iowans and marks the farmstead of Harold C. and Gladys Baughman and their family. The large, white, two-story farm home, surrounded by smooth lawn, is located across the highway from the barns. A running mare and her colt frolic in a pasture east of the house while the two purebred registered herds of Angus and Brown Swiss cattle occupy other pastures.

Harold C. Baughman was born March 28, 1901, South of Pulaski, Iowa, where Percheron horses were bred and raised for years. Importations were made by his father in 1910 and 1914 from France. Harold has lived on a Davis county farm since except for some time spent selling International Harvester farm machinery in Davis county; using a Farmall on the home farm and selling the first regular Farmall tractor in that part of the State in 1924 and in 1927, he field demonstrated a Farmall tractor for the International Harvester Company over a four-county area in southeast Iowa.

Harold was married in January 1929 to Miss Gladys Meredith. During the "lean" years of '30 to '36, Harold worked for Worm-

(Continued on Page 21)

DALE V. BLACKWELL

Dale was born and raised on a farm in Davis county and has made farming his occupation all his life. The Blackwell family now resides on a farm two miles northwest of Pulaski, Iowa.

Dale and his wife, the former Miss Nadine Bell, have two boys and two girls.

The Blackwells' farm consists of 340 acres on which he carries out a general farming program. Dale has been using a good crop rotation on the cropland and has all rolling land, contoured or terraced. A good pasture improvement program is being carried on with more than 60 acres of permanent pasture in birdsfoot trefoil.

The Blackwells' livestock program consists of a large herd of dairy cows, sheep and hogs.

Dale has been a Commissioner of the Davis County Soil Conservation District since it was originated in 1944 and has served as president, secretary and treasurer, but his conservation activities date back to 1940, while as a county AAA Committeeman he laid out contour lines on many farms in the county.

Dale, along with Commissioner P. W. Spilman and the late Fred Melvin was instrumental in getting a lime quarry started near Selma, now known as the Kaser Construction Company quarry. At that time, there was little lime available for Davis county and many farmers weren't able to

(Continued on Page 21)

AT YOUR SERVICE—

(Continued from Page 5)

All of the questions, and many others can be answered satisfactorily by contacting your County Extension Director. He is a good man to know.

Then, there is your Farmers' Home Administrator at your service. When you are in need of both financial and management assistance on a long time basis, on both real estate and chattel loans, consult your banker first. But finances may be available to you to speed up the application of conservation practices, fertilizer and lime needs, pasture re-seeding needs, farmstead buildings, improvement, etc.



Left to right: Bill Byers, County Extension Director, Evalyn Oldham (standing), County Home Economist, and Lois White, Secretary.

The Soil Conservation Service Staff in the District Office is available to help you with your soil and water conservation management land uses and program, or to develop a basic plan for your farm.

This is your soil conservation District. Many services are available besides those mentioned above. We, as your Commissioners and also the Extension Service County Committee must know you, what you want to do to improve your community and standard of living for everyone. In that way, we really can be "At Your Service." It takes the whole team to play the game and win. You are on the team!

WORKING ON THE LEVEL

You know, when things get topsy-turvy and the whole world seems upside down, it is time to "wind" your "thinker" up and start observing the things around. Because, we are sure, you will find the things that cause the trouble are those that go "up and down." Stay on the contour.



Terraces on the Walter Grim farm southwest of Bloomfield, Ia. The rope gives an idea of the broadbase design that is being used on terraces built now.

Conservation Accomplishments for Davis Soil Conservation District

While we are not nearing completion of the conservation job in the district, we are very proud of the 1955 accomplishments. Following are our to-date figures and also accomplishment figures for 1955:

	1955:	To Date:
Contouring	2109 Ac.	32109 Ac.
Strip Cropping	219 Ac.	2276 Ac.
Brush Clearing	199 Ac.	1174 Ac.
Pasture Planting	717 Ac.	8942 Ac.
Land Grading-Leveling	149 Ac.	449 Ac.
Drainage	176 Ac.	2876 Ac.
Waterway Construction	36 Ac.	3111 Ac.
Ponds Stocked with Fish	13 No.	56 No
Farm Ponds Built	50.7 No.	605 No.
Terraces	50.7 Mi.	109.0 Mi.
Diversion Construction	9.4 Mi.	32.3 Mi.
Open Drains	2.3 Mi.	32.3 Mi.
Tile Drainage	1640 Lin. Ft.	28640 Lin. Ft.
Drop Inlet Structure	2 No.	9 No.
New Cooperators	79	523
New Basic Plans	36	365
Revised Plans	17	
Soil Surveys	9855 Acres	137,803 Ac.

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The Camera Shop

Ottumwa, Iowa



Back row, left to right: Arnold Swanson, Ed Klodt, and John Grabenschroer, Wapello County ASC committee members; front row, left to right, Mrs. Arden Rose, treasurer; Anita Truitt, clerk; Mrs. William Rupe, assistant office manager; and Bernard Harrmann, office manager.

Wapello Spotlight---

(Continued from Page 3)

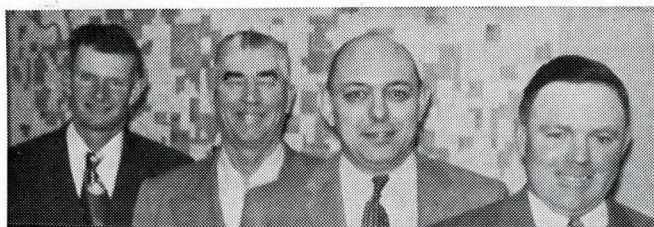
lems "run the gamut" of all those found anywhere in the state, and the applicable conservation practices dealing with these problems are just as broad. A wide contrast can easily be seen between conservation farms and those that are lacking in these modern practices. Farmland values run from a low of near \$25 per acre up to a high of \$470. It is a well-diversified farming region that is blessed with the conditions that allow for the growing of many different kinds of plant species that are limited in other sections of the state.

We, the commissioners of the Wapello Soils District, wish to take this opportunity to express our thanks to the many business places which have advertisements running in this issue. Without their help this feature issue pointing out Wapello County would not have been possible. We also wish to extend our appreciation to the many other public and private agencies for the whole-hearted cooperation received and last, but not least, to the farmers of Wapello County who carry the real burden of putting conservation on the land.

Wapello ASC Most Cooperative

Ever since the Wapello Soil Conservation District was first organized back in 1941, the cooperation of the local ASC office has been excellent. It is the ASC office which supplies the ACP share-cost payments that stimulate interest and make possible the application of many permanent practices which otherwise might be "over the farmers' heads." During the 1955 calendar year 236 District cooperators completing conservation practices under the supervision of SCS technicians received ACP assistance through the local ASC office. In addition, many of the farmers who sign up as new co-operators each year first become conservation conscious through the incentive of ACP share-cost payments. For the past several years the fact that District Commissioner Ed Klodt has also served on the ASC county committee has promoted even better understanding and teamwork among the ASC, SCS technicians, and the Wapello District.

The advertisers make possible the publication of Iowa Soil and Water—Patronize them!



Ed Klodt, Lee Stephenson, John Rukgaber, County Extension Director and Secretary of Wapello Soil Conservation District, and Leo Glentzer.

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Rehabilitation of Degraded Forest Land in Southeastern Iowa



A good stand of native hardwood on steep north slopes will make growth and in most cases is proper land use.



Diseased, poorly formed and over-mature trees must be removed and new stands established, of fast growing species.



Pines, like the stand above, are not native to Iowa, but have been successfully introduced as an excellent fast-growing species.

By Norman Hansen

Charcoal, A Possibility

The productiveness of tree crops in Iowa may be increased several fold by applying intensive management practices. Good timber culture requires the establishment and care of the best tree species on the various sites. In Iowa many introduced tree species, such as pine, grow faster, produce greater volumes and yield higher returns per acre than the slow-growing native hardwoods. Also, the productivity of existing woodlands may be increased by improving the composition and rate of growth of the growing stock through the removal of the undesirable species, diseased trees, poorly formed trees and over-mature trees.

The development of the timber resources though, depends on the cost and returns of woodland management in comparison with the alternative uses of the owner's labor and capital. Considerable quantities of wood in the existing timbers are of low value or worthless under the present marketing conditions, therefore the cost of timber stand improvement is prohibitive. Opportunities for selling this unused wood must be developed so that the woodland owner can afford to make the necessary improvements.

The Iowa Agricultural Experiment Station has initiated a project aimed at finding and developing new uses for low grade wood material. The production and marketing of charcoal offers one way of using the dense hardwoods such as the hickory, oak and ash. Over 500 tons of charcoal were used in Iowa during 1955 for home use, and industrial consumption probably exceeded home use. All of this was shipped in from outside of the State. Experimental charcoal kilns are being constructed near Ash Grove in Davis Soil Conservation District. The techniques of burning wood to produce charcoal are being studied.

Other Uses

Wood chips can be produced from waste wood. In the New England states, chips are commonly used on the farm for livestock "bedding." Chips are also being applied to the land for improving soil structure and to act as a mulch for conserving water, reducing soil temperature and weed competition. Furthermore, wood chips are utilized in industry. Therefore, methods of producing and using wood chips will be investigated.



The preservative treatment of native hardwood species will be studied with the intent of improving the utility of posts, poles and lumber used on the farm. Methods and equipment for mechanical or chemical peeling of round wood will be tried to find ways of reducing the labor required to process wood for treatment with preservatives.

Norman Hansen

Born and raised at Atlantic, Iowa. Served in World War II, in Korea. Army Military Service.

B. S.—I. S. C. in 1951 (Major - Forestry.)

M. S.—I. S. C. in 1954 (Major - Silviculture.)

Worked for U. S. Forest Service on Gallatin Nation Forest, Montana; Iowa Agricultural Exp. Station.

Mr. Hansen is now a cooperator with the Davis SCD, and owns 230 acres of timberland in Marion township.

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Terraces That Pay

The Water You Save
May Be Your Own

In this year of "soil banks," coupled with drought conditions, declining produce prices and lower income, you are looking for a means to save more of the water that falls on your land so you can grow a crop. Just why it doesn't rain at the right time we may never know, but if we can serve a larger portion of the rainfall we do get, we will have plenty of moisture. The place to store the moisture is in the soil.

Terraces which are efficient for controlling soil and water loss, and reduce the man hours of crop production can be built. We believe each major waterway should carry its portion of the water that falls in each small watershed, so each terrace should be graded to carry water to each waterway. Each terrace channel should have enough capacity to carry its load of water.

In this machine age of farming in the U. S. A., where there are now more than 4,500,000 tractors, 950,000 combines, 640,000 corn pickers, and 2,500,000 trucks, terraces must be built for the machine age, not horse-drawn equipment.

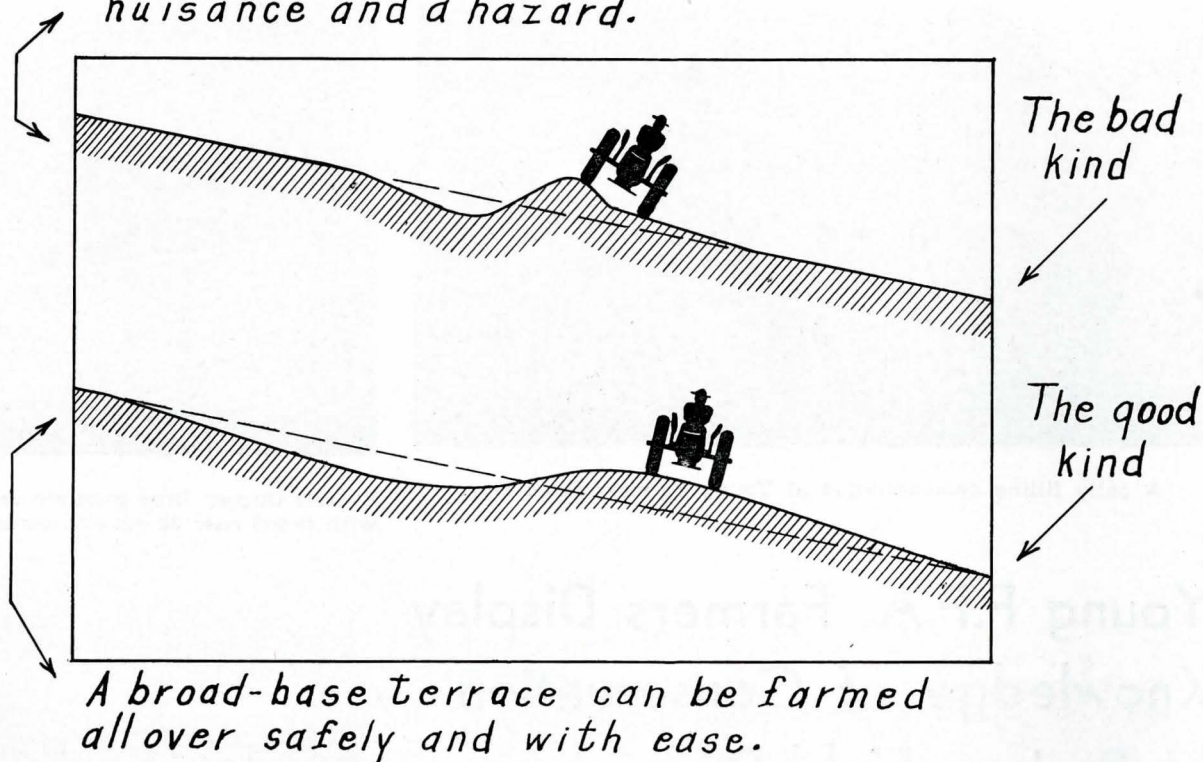
Many miles of terraces have been built in Wapello County in the past twenty years. Many will have to be rebuilt in order to be practical for our machine age. Many waterways will have to be shaped and grassed so they can be crossed, etc. It should be easier to shape a waterway after the area is terraced because terracing will slow down the rate of runoff, more water will soak into the ground, and less will be carried by the grassed waterway.

Now we come to the most important selling point of terraces. You want more water to soak into the ground for your crop production. You plow under green crops, manure, lime, and costly fertilizer to improve the growing ability of your soil, but if you don't terrace and farm on the contour, you have left the door wide open for a large loss of rainfall, besides the nutrients you just plowed under.

It has been proven by research, by practice, and by observation that the more the soil is worked, the tighter it becomes to the infiltration of water. Therefore, to increase the amount of water infiltrating into the soil, terraces and contours are a much needed benefit, in addition to the improvement of the crop rotation.

IOWA SOIL AND WATER

A narrow, steep-sided terrace is a nuisance and a hazard.



A broad-base terrace can be farmed all over safely and with ease.

Terraces That Farmers Like

There are two kinds of terraces on sloping cropland. The two kinds referred to in this article have to do with the individual terrace profile, which includes the channel ridge, back slope, overall width, and farmability. Both kinds were designed to reduce soil and water losses and were probably planned in connection with other conservation practices and farming meth-

ods so as to provide a safe margin of protection for a given crop rotation. Both kinds were planned to be cropped the same as the rest of the field.

One kind of terrace that is sometimes seen is, rightfully, the greater of two evils. It is the subject of much criticism and scorn as it buckles or breaks machinery trying to navigate its narrow channel or ridge. Many

a farmer has given up in disgust and disappointment after trying to plow or cultivate its short steep backslope. Generally, this wrong kind of terrace is left untouched and unattended as a wasted weedrow that eventually causes more harm than good. Surely the man who built this kind of terrace did not bargain for all the headaches that went with it.

Some of the responsibility for this may be placed, perhaps, on hurried technicians of the SCS for giving too little of their terrace-building know-how to the farmer or contractor who did the building. More often, there is a natural tendency on the part of the terrace builder to throw up a large back furrow with as few trips as possible, and to squeeze the whole terrace into a narrow band, so as not to "sacrifice" too much of the land lying on either side. How to build a good terrace is a difficult thing to explain or glean from printed matter. Naturally, experience is the best teacher.

There are wide differences of opinion on how to proceed, and many people visualize differently what the finished product should look like. Others may have the right idea and yet fall far short of what they set out to do. At first glance, the builder of a poor terrace may be quite proud of his work. He is certain the channel will intercept water, and the ridge is as high as his equipment will throw the soil. The rub comes when this terrace is encountered in the normal farming operations involved

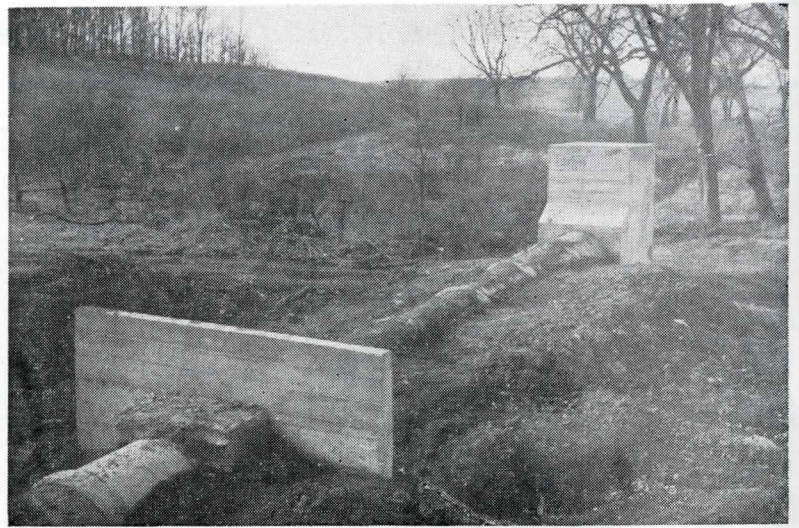


A broad base terrace is designed to fit modern farm machinery. Notice the number of corn rows on these slopes.

(Continued on Page 13)



A gully filling demonstration at Young Farmers Field Day.



Everett Dugger Drop inlet structure—13,500 dirt, 98 ft. cement pipe with 4x4x8 riser 32 cu. yds. concrete const. by J. K. Construction Co.

Young F.F.A. Farmers Display Knowledge of Conservation at Pasture Field Days

By Richard Friend

The Davis County Young Farmers are interested in conserving and building up pasture soils.

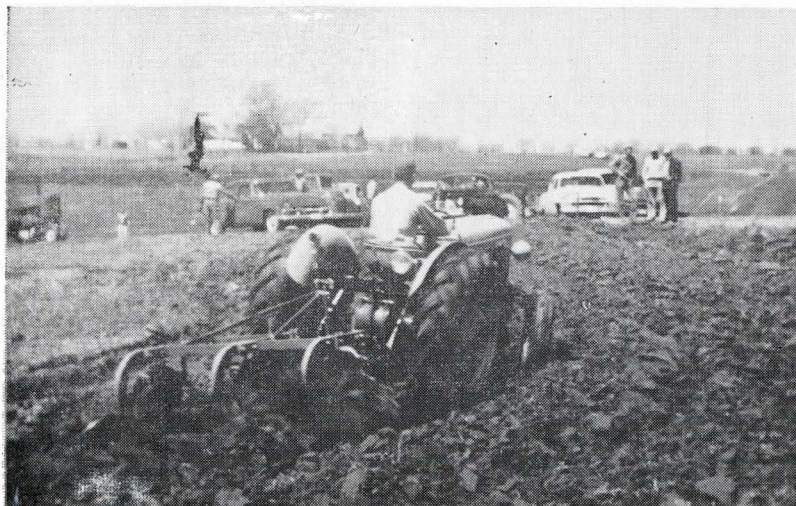
The Young Farmers sponsored two conservation Field Day. The first Field Day was held at the Dale Dixon Farm, six miles southwest of Bloomfield, April 12, 1955. The other Field Day was held at the Dee Matthews Farm, south of Belknap, a week later. Young farmers cooperating were as follows: Russell Hopkins, Larry Hopkins, Frank McCollough, Ted Dixon, LaVern Weilbrenner Junior Lister, Gordon Rudd, Wayne Williams, Don Chickering and Richard Friend.

The improvements that they

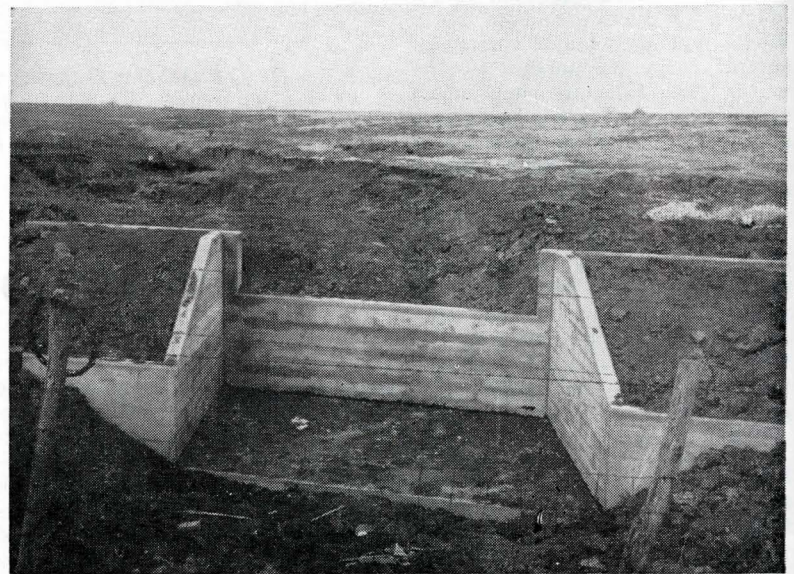
made were as follows: Pushed in ditches, prepared grass waterways, contoured seed bed preparations, built terraces and used the new and old methods of establishing seedlings.

Ten Young Farmers and their instructor, Mr. Kermit Howell, with the help of Clay Barnett, Farm Planner for the Davis Soils District, M. H. Elson, High School Vocational Agriculture Instructor, and Jack D. Chamberlain, Conservation Aide for the District played the prominent roles in the Field Days.

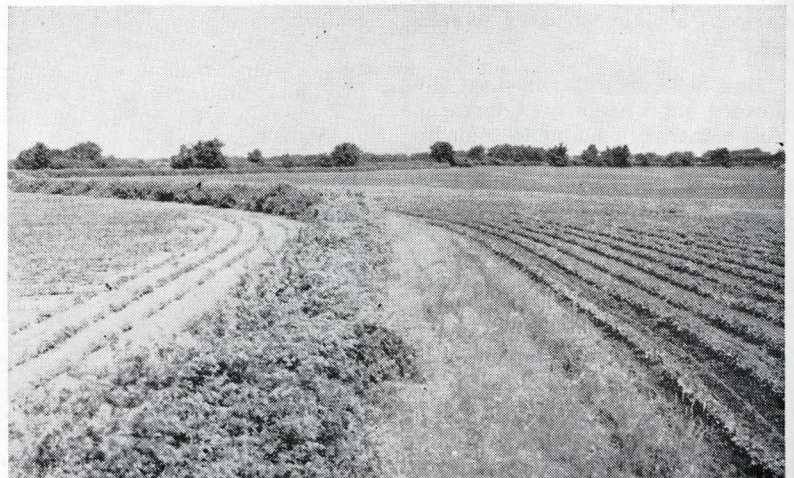
The equipment and fertilizer used was supplied by the Young Farmers and local cooperative machinery dealers.



Another Young Farmers demonstrates terrace building.



Weir notch structure on Everett Dugger farm. Construction by J. K. Construction Company.

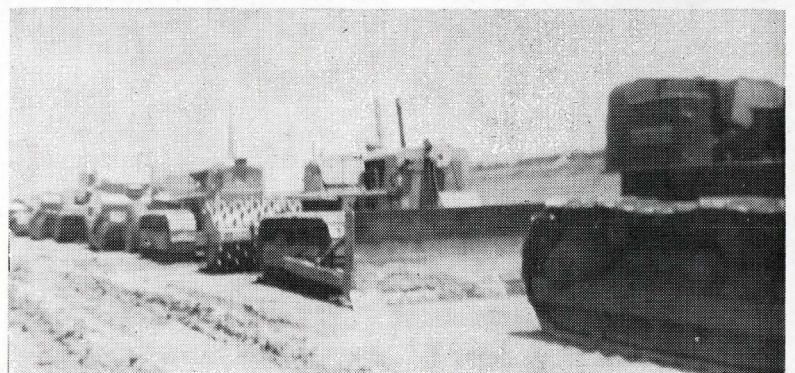
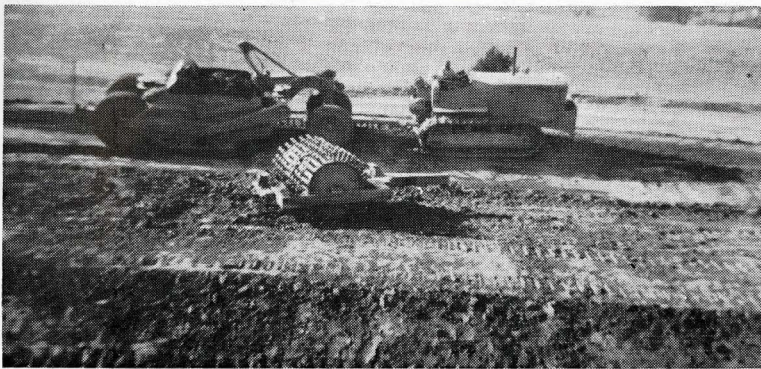
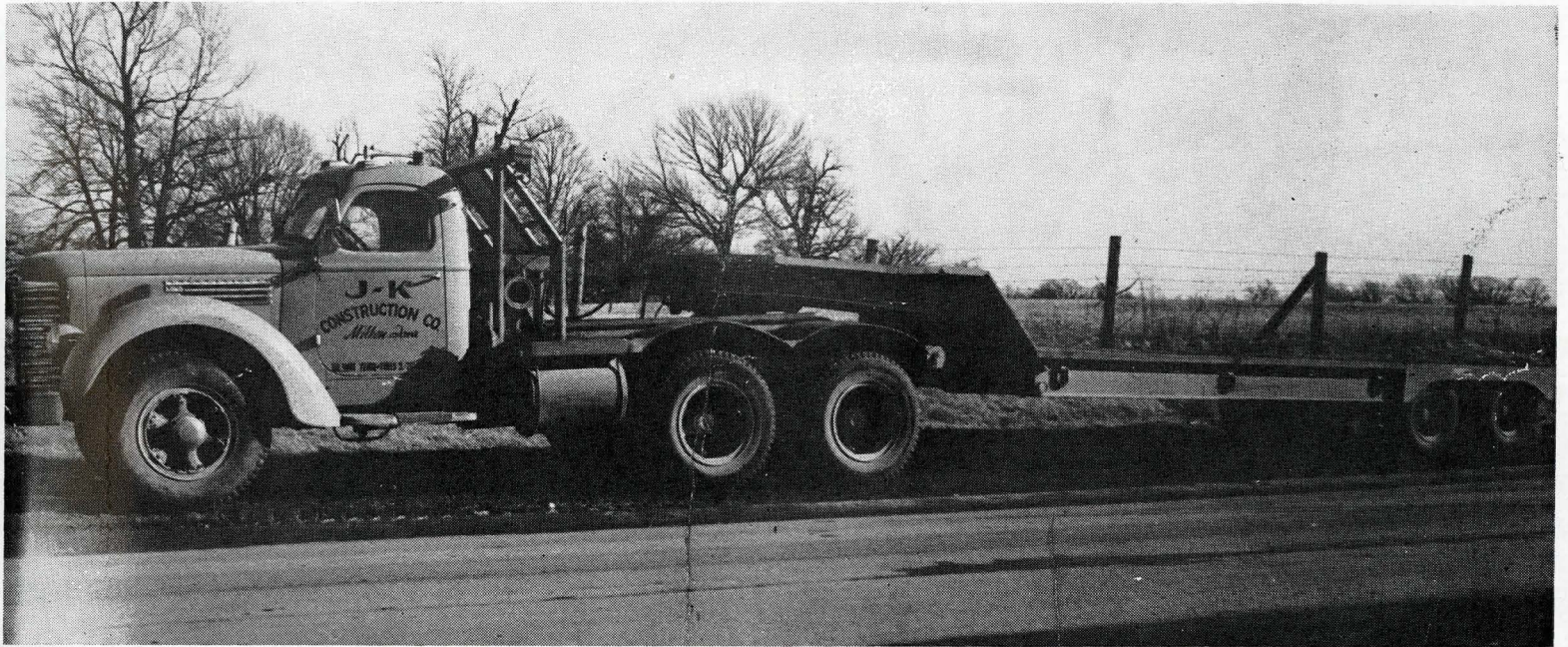


A contoured fence of multiflora rose on the Carlon Cary farm east of Bloomfield. This rose fence was planted in 1950 and served as a fence for all livestock in 1952. This is one of the best food and cover areas for quail. It furnished a travel lane from one end of this contour field to the other. Thanks, Mr. Cary.

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PASTURE IMPROVEMENT PAYS OFF



This is the kind of pasture with which Harry Sterling started.

Nobody was sure just what Harry Sterling had in mind when he bought the 128 acres of rolling-to-rough land in the spring of 1954. There are no buildings on the place; fences needed fixing; the water supply for livestock was questionable; and weeds and brush had pretty well taken over much of the land. None of the land had been broken up for some forty years. It was typical of hundreds of such tracts of unimproved pasture seen in southern and southeastern Iowa.

Harry Sterling and his crew pitched in a day or two after he bought the place and in a matter of weeks had his pasture renovation program well on its way. They reduced the heavy sprouts and brush to a point where eighty-five acres of the ground could be plowed. They marked out contour guide lines and proceeded to plant the eighty-five acres to corn. Fertilizer was applied and some 3,000 bushels of corn harvested that fall.

The main object was not to raise corn for its sake, but rather to control the brush and bring the soil into a more workable condition for later seeding to birdsfoot trefoil. Since clean cultivation for one year offered one way to do the job, Harry figured that the best corn crop possible for this type of land should at least be attempted to help pay some of the expenses he was accumulating. He realized also that whatever fertilizer the corn didn't use would be stored in the ground for later use by the trefoil.

The eighty-five acres were limed that same fall and winter. In the spring of 1955 Harry prepared the ground the same as if he were going to seed alfalfa. He seeded it to six pounds of birdsfoot trefoil and one pound of mammoth red clover per acre. He used a twelve foot grain drill with the spouts removed to spread the seed on the surface. Then he rolled it in with a corrugated roller.

No oats or grain of any kind were included, since Harry didn't especially need the oats and figured that they would only compete with the birdsfoot for sunlight, moisture, and nutrients. One hundred pounds of 8-32-0 fertilizer was applied to the seeding to take care of its initial nitrogen and phosphate needs. As a safety measure Harry used two times the normal dose of inoculant for the trefoil seed and used milk as the adhesive agent.

Last spring he built two farm ponds on the place and planned and put in fences so as to provide five separate pasture fields with each bordering on at least one of the pond acres.

Harry Sterling is not a man to start something and then do it only half right. At the same time he doesn't believe in tossing money and time into something just for the sake of success. He tackled this project according to the best recommendations available from the public agencies doing research on this subject. He also followed through by mowing to control weeds in June, July, and August.



Two years later he's examining an excellent stand of birdsfoot trefoil.

There haven't been any cattle on the place for the past year while his eighty-five acres of birdsfoot trefoil were coming into its own. Lack of fencing and water would have made grazing hard to manage anyhow. The Sterlings have a lot of cattle on other land they own. But around the first of June about eighty-five head of beef cows are going to be treated to some of the best pasture they have ever seen or eaten.

The stand appears to have come through the winter in fine shape and it is a beautiful site to look at. If things go like Harry Sterling plans, many other acres of second-rate permanent pasture are going to be in for the same treatment.

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IOWA SOIL AND WATER

Terraces---

(Continued from Page 9)

with row crops, small grains, and hay. Corn planters, grain drills, and cultivating equipment will not take to the radical cross section. Pickers, combines, and rakes groan and hang up and tractor wheels slip and churn the dirt on the short, steep slopes.

The other kind of terrace—the good kind—has about the same amount of effort put into its construction as the poor one—sometimes even less. The only big difference in this latter terrace is that all of its slopes are long and gentle and its channel and ridge are broad. This kind is called the broad-base terrace. Its upper and lower slopes blend in with the original sloping ground so smoothly that it's hard to tell just how broad the base really is. The terrace becomes part of the field itself and nothing is sacrificed because everything is farmed with efficiency and ease. Four corn rows should easily fit from the center of the channel to the upper edge. There should be room for another four rows from the channel center to the flattened ridge, and still four or more rows on the gently sloping down-hill side.

Machinery operates over the low-angle surfaces the same as on any other part of the field. Terrace maintenance and adequate channel capacity are easier to keep up. It may appear, as some farmers have remarked, that you are plowing up the whole field when you build this broad-base type. A base forty feet wide is not too much land to include during construction in order to end up with a desirable profile.

After the terraced field goes through one crop year, this forty foot wide strip is lost to the eye, and the actual terrace appears much narrower. Terraces are planned to have a channel capacity adequate to handle the very heavy rains without topping over. This usually acquires a channel cross-section area of from eight to ten square feet. In order to get this capacity in the channel and at the same time make it gentle and farmable, it is natural that plenty of width holds the answer. This is the kind of terrace farmers like.

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Dunnville Baptist Church Operates Lord's Acres The Conservation Way



Dunnville Baptist Church, Northeast of Bloomfield, Iowa

This is the story of a church and a farm and how each one helped the other to greater service in the community with the assistance of the Davis County Soil Conservation District.

This story begins when the Dunnville Baptist Church started having regular services again after leaving the church idle for some ten or more years.

The building was badly needing repairs and redecorating. It also had never been wired for electricity. These things were accomplished by those interested in seeing the church active again with the help of the Ladies Aid.

A student Minister was obtained as pastor and from the beginning it was obvious that if the church was to be of full service to the community that additional funds would be necessary to provide badly needed facilities.

The Pastor, Reverend Jack Anderson suggested that a "Lord's Acre Program" might be the answer. This program was decided

upon by the members and a farm was rented for five years to be operated on a crop share basis by the members. This farm consisted of 160 acres and under the agreement all of the tillable ground was to be operated by the church.

In 1947, a farm plan had been made with the assistance of the Soil Conservation Service for this farm but it had never been followed. At the time the church group took charge, the partition fences were all in bad shape. About 15 acres of what had been cropland was abandoned and another 12 acres of bluegrass pasture had been allowed to grow brush and elm trees because of inadequate fencing. The church workers, after first studying the original SCS Farm Plan, took out all partition fences and in one day constructed 120 rods of new fence across the South side of the farm, leaving about 120 acres in one large field.

Next, the SCS Technicians were called in to layout the en-



Members of the Dunnville Church that have been cultivating are from left to right: Otis McGee, Orville Martin, and Iles Heady.

tire 120 acres in contour strips with adequate waterways as outlined in original farm plan. A brush cutter and bulldozer were hired to clear the old fence-rows of brush and trees, shape waterways and to reclaim the 12 acres of abandoned pasture which became a part of the strips. The strips that were to be seeded to alfalfa and clover were limed and about 200 lbs. of 12-20-0 was applied with the nurse crop of oats.

The strips that were planted to corn received 200 lbs. of 12-12-12, plowed down and an additional 100 lbs. of 8-16-8 was added with a planter attachment. The strips were planted to soybeans and received no treatment. The first year corn yields were about 40 bushels per acre which was about 10 bushels above the previous average for the farm and when one considers that the corn strips included much of the ground that had been abandoned as too poor to farm, the gain is even more significant. Oats yielded about 40 bushels per acre and soybeans 25 bushels. The net profit for the church was \$1700 dollars the first year.

The second year the fencing program was constructed with the new seeding and oats receiving 200 lbs. of 10-20-10 and corn strips were fertilized with a three-hopper fertilizer spreader with more nitrogen being applied to the parts of the strips low in fertility and all of the corn strips receiving a complete fertilizer plowed down at a 100 lbs. to 400 lbs. rate; corn yields the second year went up to 50 bu. average

with 12 acres of the corn being on the previously abandoned ground. Oat yields were up to around 60 bushels and beans yielded 20 bushels. When we consider both of these years, bad dry summers, the increase in yields is even more outstanding.

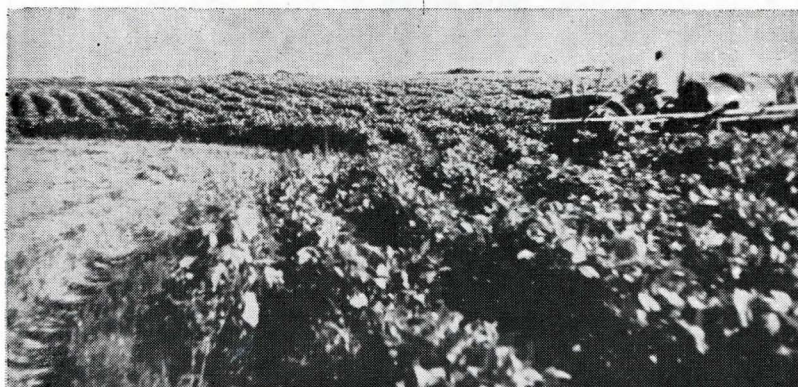
The way the fertilized strips stood the drouth was noticed by the entire community. Three farmers in the community adapted strip cropping for their own farms after seeing what fertilized strips would do in one year's operation.

The church netted \$1500 the second year with less acres in row crops.

The highlight of this story is this: The church has helped a rundown farm to become a productive unit able to carry its full load of community responsibility. The farm has helped the church to become a greater spiritual influence in the community and provided funds that will enable it to increase its facilities for community service.

The workers are gaining experience in conservation farming which benefits all of us while enjoying fellowship together. Truly these have been God's Acres.

Let those who are called to the sacred vocation of tilling God's soil be mindful of the tremendous moral obligation to protect and conserve the soil. To neglect this obligation is a sin against the commandment, "Thou shalt not steal;" for he who takes from the soil its richness, steals from his Creator, from his sons and daughters, from his neighbor, and from his nation.



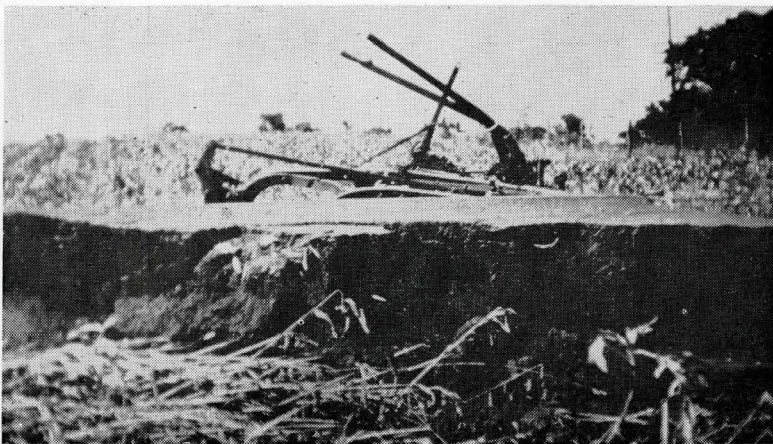
Iles Heady's sprayer outfit spraying for grasshoppers on the Dunnville Church Farm.



**Contour strip cropping on the Dunnville Church Farm
IOWA SOIL AND WATER**

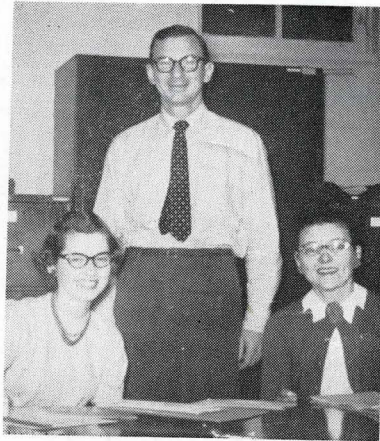


Sheet and gully erosion pictures in Davis county.



A plow nearly covered by silt from cornfield in background. A later rain caused the silt to be cut off in this shape by the water course in foreground.

Farmers' Home Administration



Doyle P. Schmitter, Supervisor, with his two secretaries, Mary-Ann Spurgeon, left, and Mae Huffman, right.

The Farmers Home Administration makes a number of various type loans to farm operators. Regardless of the type of advancement, soil conservation is always a major factor in setting up a loan. Special consideration is given the aptitude of the family in the Soil conservation field for our Farm Ownership division. In making a farm loan up to forty years, the Farmers Home Administration is particularly interested in knowing the family will adopt and follow a soil conservation plan. Funds are made available in the loan for land development which covers fencing, lime, fertilizer, seed, clearing, terracing, ponds and anything that might be needed to carry out a recommended soil conservation plan. We do this realizing that a good land use program is fundamental in making a good standard of living and in retiring the loan.

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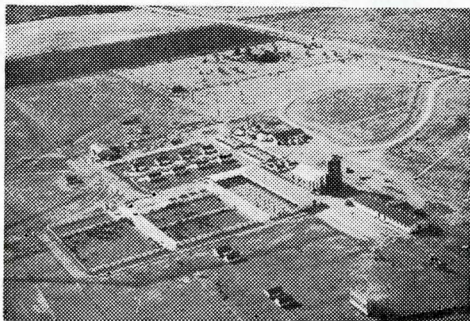
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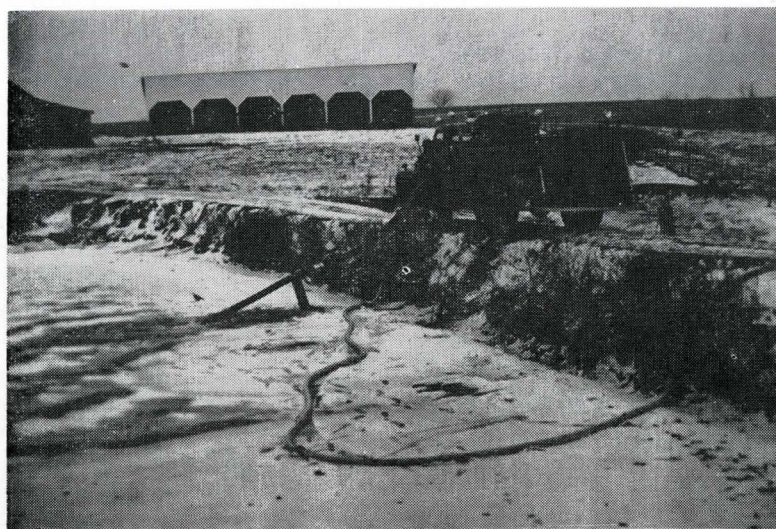
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The need for effective utilizations of pasture area depends upon a good, well-located water supply. Since the organization of the District over 605 ponds have been built. Many of the first ponds were not large enough to hold sufficient water during prolonged dry seasons to furnish really good clear water. In the past, ponds have ranged from one-fourth to one-half acres. A few one acre or more. All must be eight feet or more in depth.

Today, ponds are being built much larger and deeper ranging up to one to four surface acres in size. Such ponds are located on the following farms: Dewey Harper (two ponds), Garrett-Mikels Farm, Burchett-Daugherty Farm, Marquis Houghland, Ira Reisch, Earl Harris, Taylor McElderry, Glen Herbert, Herman Bachman, Dewey Grim, Eli Bell (three ponds), Harold Cruikshank, Gerald Forsythe, Willis Harris, Verne Smith, James Melvin, Sheaffer Pen Company Farm, Strahle-Wray, G. E. Van Horn, Lowell Wagler.

While Vern Smith, James Melvin, and Dewey Harper are also of the drop-inlet structure type because of the large drainage areas, they are all used for stock water supply and gully control.

These ponds, or tanks below ponds, should be so located that livestock will not have to travel far, nor over rolling or rough pasture areas and create an erosion problem. This in itself, promotes good grazing management.

Yearly water requirements are also considered in judging pond sizes. Three feet per year for evaporation, 12 to 15 gallons for each horse or beef cow, one gallon for each head of sheep. It will

require 1.5 acre feet of water for 100 head of beef cows. In extremely dry seasons, water for dairy cows instead of beef will greatly increase the yearly requirements.

OTHER USES

As illustrated ponds located within a few hundred feet of the farm buildings is valuable from the standpoint of fire prevention and control. While the barn was lost, the fire was controlled and did not spread to other farm buildings.

Again if the pond area is properly fenced, wildlife feed and cover established and the pond stocked with fish, it is a good place for family recreation on the farm. Fifty-six farm ponds have been stocked with fish through the District and several others by the State Conservation Commission from the hatchery at Lake Wapello.



Doyle Schmitter, County FHA Director is looking on as George Rasmussen prepares to use the Soil Conservation District's Brillion seeder, that is available to Davis County farmers at a nominal fee.

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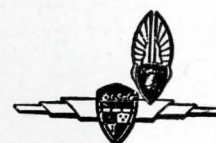
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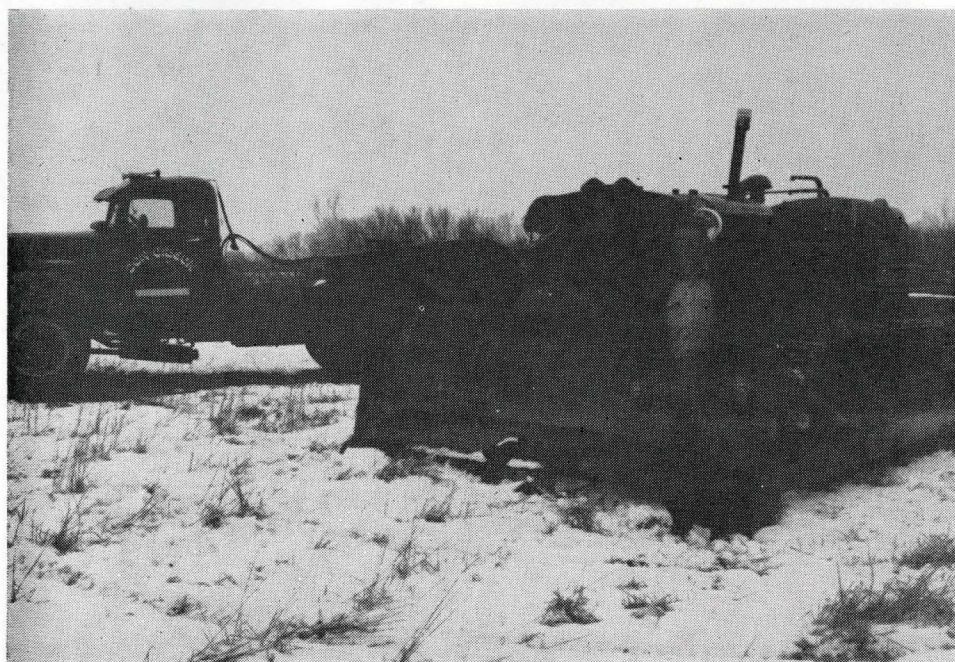
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4-H CLUB TEACHES SOIL CONSERVATION



TERRACE PLOWMAN

Top row, left to right: Keith Hall, Bernard Stodghill, Billy Aubrey III.

Bottom row: William Aubrey, Richard Thompson, Leo Glentzer, Roseann Aubrey.

Members of the Polk Boys Booster's 4-H Club. These members will act as plowmen on a terracing demonstration for the 4-H Soil and Water Conservation Field Day.



Top row, left to right: Everett Bates, Bernard Stodghill, Glen Boone, David Jay.

Bottom row: Deverne McFarland, Leo Glentzer, Steve Mace, Charyl Baxter, and Eugene Long.

These 4-H members will be preparing seed bed, inoculating seed, planting and covering the seeding. Some will be demonstrating rate of seeding, depth of seeding, etc.

The Polk Boys Boosters' 4-H Club under the leadership of Leo Glentzer and William Aubrey hold an annual soil conservation field day. It is one method, they feel, of teaching their fathers and neighbors good soil conservation practices. Each year they select an area of approximately five acres on one of their dad's farms as a demonstration site. Plans are then made in the 4-H club meetings in January and February on what demonstrations they will use and the job of each 4-H member. In the pictures above you see Leo and William discussing with 4-H members who will do the work of plowing in terraces with farm equipment. Five or six will bring their tractor and plows, and under the guidance of the soil conservation technician actually plow in the terraces that have been laid out. Recommendations for terraces have been broad base with a fairly gentle back slope which makes farming somewhat easier.

Before the terraces are com-

pleted, two or three other 4-H members who brought their disks, start to prepare a seed bed for the seeding which will be done on the terraced area. Another 4-H member will bring an end-gate seeder or a grain drill for the actual seeding of a recommended grass and legume mixture which is suitable for the fertility level of the soil. On the areas adapted to alfalfa and brome seeding, this mixture will be used. On areas where the fertility is low, a seeding of birds-foot trefoil is used. Naturally, the needs of the farmer are taken into consideration in making the seeding. If pasture is needed for the year when the improvement is being made, a seeding of two bushel or less of oats is made at the time of the seeding. In some cases, the oats are taken off as a hay crop, here again the same grade of seeding is made.

If fertilizer is needed, and this is determined by soil samples which are taken the preceding fall, one 4-H member will bring

a fertilizer drill and this is applied prior to the disking in preparation of the seed bed.

Someone might raise the question as to where the girls and younger 4-H club members fit into the program. They have a definite part in demonstrating the proper method of inoculating legume seeds as well as a very interesting demonstration on rate of seeding and depth of seeding.

The program generally starts at 10:00 or 10:30 in the morning and continues until the terraces have been completed and the seeding is accomplished. Lunch is normally served by the girls' 4-H club in the area, helped by the mothers of members of the boys club.

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The Bollman Story



D. C. BOLLMAN

The Bollman family moved to their present home known as the Elrow Angus Farm in 1940. The large white house and barn is typical of the area in which they live southeast of Pulaski. A person can tell by simply driving into the farm court between the house and barn that the Bollmans are good farmers. The well-painted buildings, the white board fences, the beautiful fir and pine windbreak on the north and the young orchard east of the house, reflect the farm management, good land use and high crop yields necessary to bring about these conditions on a farm of this size.

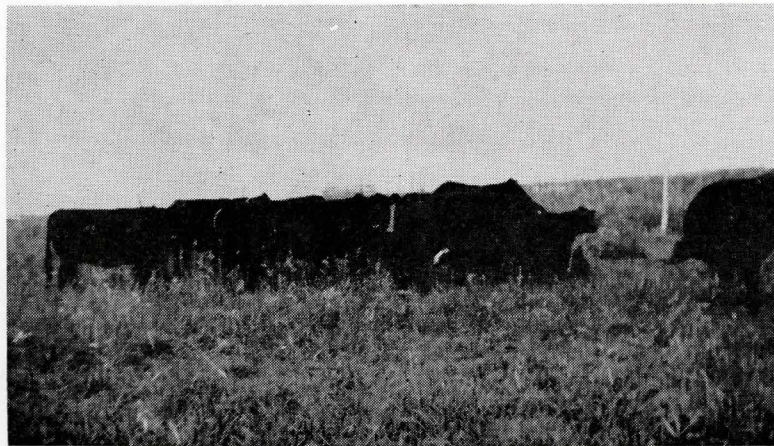
Mr. Bollman's soil conservation activities started soon after the Davis Soil Conservation District was established and have continued to the point that in 1953 he won the county award of The Des Moines Register and Tribune Contest that has been sponsored locally by the Bloomfield newspapers. After winning the county award, he won the District award and progressed to be one of the state finalists.

Mr. Bollman's farm consists of 160 acres of Edina, Seymour and Shelby silt loam. In the past, he has used a four-year rotation of corn, oats, one year of hay and one year of rotation pasture. After using this rotation several years, to increase fertility

and organic matter and the construction of nearly four miles of terraces to conserve soil and water, he has added another year of corn to the rotation. Mr. Bollman states that since early 1940, the average corn yield of this farm has increased from 35 bu., to 70 bu. in 1955 which was a year hard hit by drought in Davis county. To prove the production record of this farm, the Bollmans raise all the feed for a 25 beef cow herd keeping all young stock to sell for breeding purposes, all the calves from this herd, and one-hundred head of market hogs per year.

In talking to Cargile he strongly emphasized the flexibility of his conservation plan. He states that if seeding failures should occur, he still had a young alfalfa brome that would stay for a third year. He also states that after following a regular rotation several years and with his terrace to conserve moisture, a seeding failure very seldom happens.

Mr. and Mrs. Bollman have been members of the Locust Grove Methodist Church since childhood. Cargile has been a 4-H leader for several years, a Farm Bureau Director, Director of the County Angus Association, a



Registered beef cattle on good improved pasture on the D. C. Bollman farm.

township ASC Committeeman and a Director of the Southern Iowa Experimental Association.

The Bollmans have four children, Bob the oldest is a WUC with SCS at Fairfield; his interest in Soil Conservation was stimulated by his father's work on the farm. Steve is a Junior in Farm Operation at Iowa State College. Doran and Phyllis are seniors at Pulaski high school. The Bollman children have been very active in 4-H work. Doran is the present county president; he showed grand champion baby beef at the 1955 county fair, showed champion Angus heifer both in 1954 and '55. He showed champion Futurity heifer at Iowa State Show and sale recently held at Des Moines. He also won the Harris Award for the outstanding boy in 4-H in Davis county for the year 1954-55.

LEO GLENTZNER—

(Continued from Page 3)

Down through the years Leo and his wife have given unselfishly of their time and talents to the youth of the community. Leo has served nineteen years as 4-H leader and one of the highlights of the club's activities is an annual field day demonstration of soil conservation by the club members.

LEE STEPHENSON—

(Continued from Page 3)

District No. 9 of Wapello County, and as a member of the official board of the Methodist Church of Eldon. He is a member of the Odd Fellows and Masonic Lodge of Eldon and is a past president of the Eldon Lions Club, and a Master Key Member of the International Association of Lions Clubs.

Also, he is chaplain of the American Legion Post of Eldon. He has also served as member of the board of the National Farm Loan Association at Ottumwa and was president of the board for many years. He has served three years on the Advisory Board of the Federal Land Bank of Omaha, serving the states of Iowa, Nebraska, South Dakota, and Wyoming.

At the present time Lee is third vice-president of the Federation of National Farm Loan Associations of the United States. He is the only director of a Farm Loan Association ever to serve in that capacity.

The Stephensons have one son, who is a geologist in the petroleum industry and presently lives in New Mexico. The Stephenson farm of 258 acres lies mostly in the valley of the Des Moines River, where he has specialized in drainage and flood control work. Recently, Lee was awarded a bronze plaque from Radio Station WMT of Cedar Rapids for his outstanding work in the field of conservation in the State of Iowa. In past years Lee has attended the meetings of the National Association of District Commissioners in Oklahoma City; Cleveland, Ohio; Denver, Colorado; New Orleans, Louisiana; and Des Moines, Iowa.

In the past sixteen years he has traveled in forty of the forty-eight states of America. Wherever he has gone he has studied soil and water conservation throughout our country.

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CHILLICOTHE, IOWA

(Continued from Page 5)

Pearl, as he is known by everybody, was born and raised in Davis county, and has lived there all his life. He was born November 11, 1888 near Mark, Iowa. After teaching school for five years, he married Miss Sylvia Fleming and they have three children: Dean, Howard and Mrs. Lionel Evans, who all reside near the parental homestead in the Dunnville community.

Pearl is associated in partnership with his son, Dean, in his farming operations. They farm 770 acres in a general farming program, using all grain and hay produced in their livestock program which consists of 80 beef cows, and 100 ewes. They feed out all of their calves and lambs.

Pearl has in the past, been using a four-year rotation of: corn-oats and two years of hay. After using this rotation for several years and building more terraces, he is now using two years of corn-oats and two years of hay or rotation pasture. Since the

Davis County ASC Committee and Manager



Left to right: Area Supervisor John Schwitzer, Leo Foster, David Bolick, Office Manager—(standing), Vic Cowles, and Lev Troutman.

Soil District was started, Pearl has built over six miles of terraces, one and one-half miles of diversion terraces, six farm ponds and many grass waterways.

In his pasture program, he has seeded 50 acres of birdsfoot trefoil to date, and has improved 50 acres of other pasture.

Pearl has been a District Commissioner of the Soil Conservation District since its beginning in 1944, being the first chairman of the group and serving as chairman once since that time.

Pearl has been very active in community affairs all his life. Listed below are some of the activities in which he has taken part:

Helped to organize and is now a director of local REA.

Helped to organize and past director of Southern Iowa Experimental Farm.

One of the first directors of County Hospital Board.

Past Fair Board director, past school director.

Chairman of Dunnville Church Farm Operations Committee.

Pearl has been recognized as an outstanding Commissioner in Iowa, being picked as the top Commissioner in 11 counties in 1952. This award was presented by the WMT Radio Station.



Site of field trip of Girl Scouts where they observed contour strip cropping, terraces, newly constructed waterways and a farm pond.

Girls Scouts Get First Hand Look at Conservation

The members of Girl Scout Troop No. 4, through the kind assistance of the local soil conservation office, have earned their conservation badges and were to have been awarded these merit badges at a Court of Awards in March.

A soil conservation instruction class was held in October by Clay Barnett and Jack Chamberlain for members of the Troop. Films were shown by Mr. Barnett outlining the ultimate purposes of soil conservation. Different soil and water conservation practices were shown on film and discussed, with Mr. Barnett pointing out to the girls, the long range effects of conservation practices. With this background study, Mr. Chamberlain then accompanied the girls on a tour of his farm, where various practices which had been discussed were observed. A tour of the fisheries at Lake Wapello was completed with Ralph Shepherd assisting Mr. Barnett in explaining the fisheries and other activities at the State Park. Wildlife refuges were discussed and their importance emphasized to the girls.

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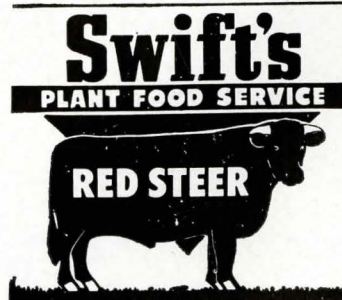
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HAROLD BAUGHMAN—

(Continued from Page 5)

houdt Lumber Company at Pulaski and operated his threshing machine during the threshing season. Harold and Gladys rented their first farm and extra acres, 630 in all, in 1936 and moved to their present home with their five children: Mary Ann, James, William, Glenn and Joy.

They have developed a purebred, registered herd of Aberdeen Angus cattle, numbering some 80 cows and at the same time, a purebred Brown Swiss dairy herd, twenty some cows which they milk; and have found this combination to "lick the platter clean" because these cattle use all kinds of grain, feed and roughage. Harold uses hogs in a large number to do a good, clean-up job of milk and waste. They number 225 to 250 per year.

In 1947, the Baughmans started a progressive soil building program on their acres and have recently named the operation "Levelcrest Farms." Levelcrest Soil Service is the name given the delivery and spreading of rock phosphate, murate of potash, super phosphate, and mixed fertilizers. Also, anhydrous ammo-

Davis County ASC Office Staff



Left to right: David Bolick, Office Manager, Mabel Friend (standing), LuEtta White (standing), and Hazel Hammersly (seated).

nia is, at present, applied as a custom service.

Harold contoured corn first on the East Farm in 1943, and the results were so pleasing that most of his land has now been or is being worked on the contour. This has proven to be very complimentary in these last dry sea-

sons as well as a soil saver in the wet seasons.

At present, Harold is serving as a member of the Board of Trustees, of the Pulaski Mennonite Church (his 26th year) and trustee of Middle District Conference of the same church, Director of Citizens' Mutual Telephone Company, Director of Southern Iowa Experimental Farm, serving on FHA Committee and is a Soil District Commissioner. Harold has served on various school boards and 12 years on the Board of Education in Davis county.

DALE V. BLACKWELL—

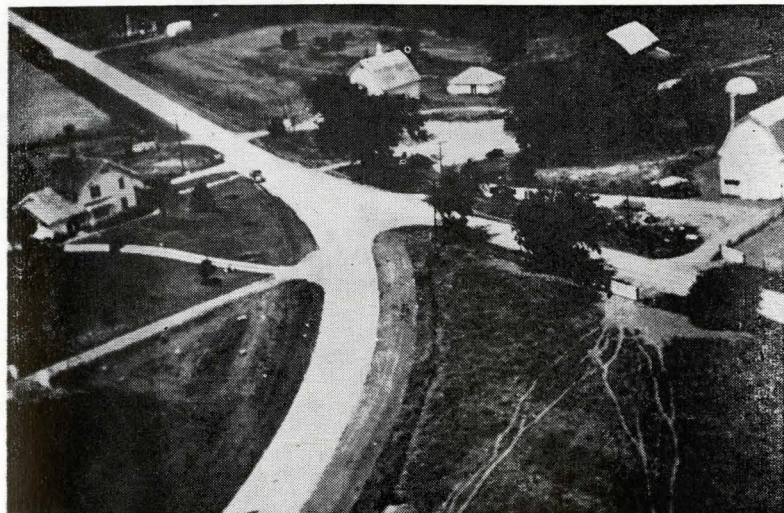
(Continued from Page 5)

make use of the AAA payments to apply limestone to their land.

Dale helped to organize the Southern Iowa Experimental Farm. This has been a valuable asset to Davis as well as surrounding counties. Dale received a Master Farmers' award for the year of 1949, from Wallace's Farmer. He is the only farmer to receive that award from Davis county.

The Blackwell family are members of the Bloomfield Chris-

tian Church of which Dale has been a deacon. He always has been an active member of the Farm Bureau and is a Rotary member. He is a member of the local Fish and Game club which also has promoted conservation.



The farmstead of Harold C. Baughman, Chairman of the Davis County Soil Conservation District. The farm is located on Highway 2 four miles east of Bloomfield, Iowa.

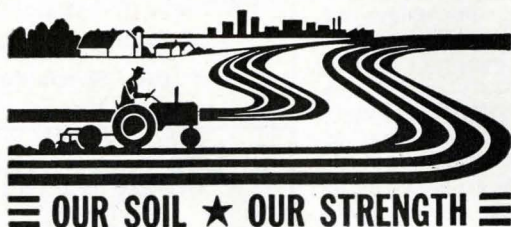
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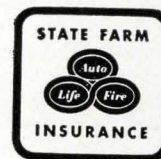
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Conservation farming, among other things, might be considered as a science of applied biology in perhaps one of its most important and practical forms. Certainly, fundamental principles of biology are observed by every farmer in the ordinary business of everyday farming. That the farmer who knows the most about effective biological processes and uses this knowledge in its application to farming will be the most effective and efficient farmer, goes without saying!

Our machine technology has advanced farming far. We can now produce more than twice as much for the same amount of effort as we could thirty years ago.

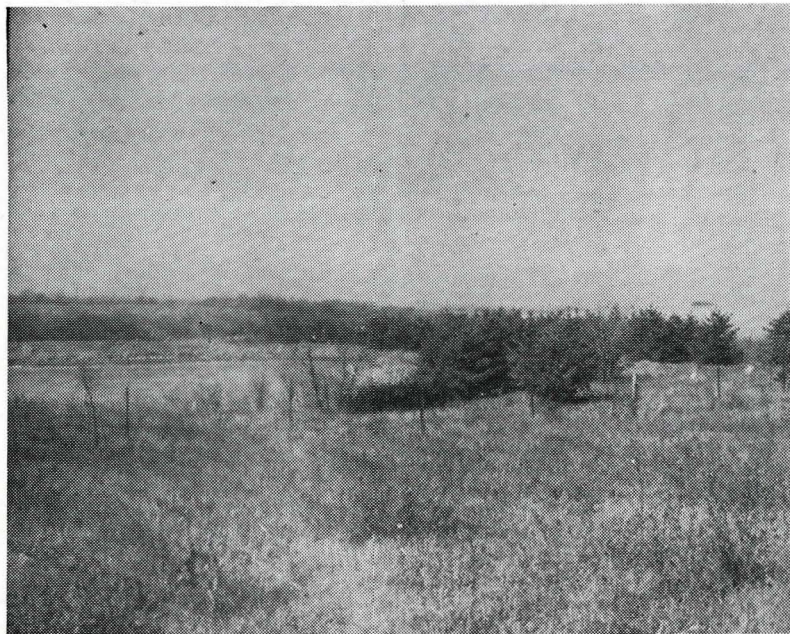
Our biology accomplishments in farming have also come far, but we are still relative pioneers in this field. We have developed and are developing new hybrids and varieties of most all of our common farm crops. Breeds of livestock have been continually improved, yet we find that new problems are continually emerging. We are finding that we must take into account the continual interplay of life—bacteria, vegetable and animal—if we are to be successful farmers.

Perhaps we might call this the natural balance which is always in existence in nature and which everyone talks about, but which few, if any, people understand.

Most of us know, for instance, that every form of life—plant or animal—which exists in any area has some relationship to or effect upon all other forms of life in the same general area.

We can see this in the songbirds' continual quest for insects; the insects' continual search for food—and finding it; the enormous reproductive potential he has, in affecting the food plant and in turn affecting you! Or the fox who is continually hunting (and eating) the field mouse, who in turn is hunting the farmer's alfalfa! The shrew who is voraciously hunting the meadow mouse, the grasshopper or any other insect to satisfy his enormous appetite!

The hawk by day and the owl by night who are continually hunting, hunting, hunting—always hacking away at the great rodent populations which are ever ready (if the controls are removed) to burst forth with overpowering numbers and devastate the plant life on which you and I depend. When the controls are removed in nature, we really see overproduction!



Wapello County pond fenced from livestock, and protected area planted to clumps of Scotch, Virginia, and Red pines, as well as honeysuckle and plum. Over half of the area is open grass—necessary for wildlife nesting, and also more effective recreational use of the area. Pond is stocked with bass and bluegills.

This area is an excellent wildlife oasis—quail, rabbits, song birds, and many other forms of small wildlife frequent the area.

We see these things, but there are many kinds of interplay we do not see, but which may nevertheless be important to us: Diseases which may be carried from insect to animal—to livestock—to you, or in countless ways known and unknown, all of them finally reaching us in one way or another.

Every form of life in nature has some type of natural control; were it not so, we would be up to our ears in alligators (as the man said). But this could apply to any form of life.

In your farm pond, one pair of bass can produce 5,000 young in a single season. One pair of bluegills can produce as high as 20,000 young. Obviously if some type of natural control didn't exist, there wouldn't be enough water in the pond to cover all the fish produced.

When we humans get into the picture and use our very effective (at present anyhow) chemical controls, we always affect (desirably, we hope) the entire group of living plants, insects, animals, and birds in the area.

In the case of the common house fly and many other insects, too, continued use of DDT has developed a race of resistant individuals. The heavy use of DDT may have destroyed the natural control for the flies because it eliminated almost all of the flies (the food for the natural control organism).

Now with the great resurgence of numbers due to increased resistance to DDT, these flies may

not have the needed natural control to keep them within bounds. This then is a biological problem of mounting importance.

When a new species of any animal or bird is introduced into a new area with no natural control, the results are likely to turn out badly if the new introduction survives. Witness the starling, sparrow, European hare in Australia (the same one some people are trying to get started in this country!), carp, etc.

We know that we will keep on using sprays to combat insects and other so-called pests—but the real conservation farmer uses only what is necessary to do the job, while at the same time he utilizes all of the help he can get from his "natural balancer" friends.

His "natural balancers" must have some undisturbed natural areas (natural or planted trees, shrubs, or grasses) in which to live, to reproduce; cover to escape enemies; and maybe even places to meet their friends. Odd areas in corners of fields, well grassed waterways, meadow turn rows, ponds and areas around No Hunting Allowed Continued-ponds, hedge and shrubby fence rows, woodlands, and edges of woodland, and especially a good interspersed of these areas about the farm is necessary. He makes the entire farmland area available for the free interaction of the natural living controls, which we all want to use to assist us in doing a better job of conservation farming—in its broadest sense.

These odd areas, shrubby fence rows and multiflora rose hedge wildlife areas planted around ponds we are all working for the man who is awake to their possibilities. If these areas are not naturally in existence on his farm, the conservation farmer plans them. Wildlife planting packets for this particular purpose are available through the State Conservation Commission in Des Moines.

Land use suited to capability of the land, good rotations, pasture improvement, woodland improvement and management, supporting conservation practices such as terracing, strip cropping, grassed waterways, contouring, drainage, erosion control structures, etc. are all basic parts of the farming job on this land of ours, if we are to survive on this terrestrial ball. Our lives are inextricably tied up with the lives of our furred and feathered friends (and enemies). If we make no provision for them on our lands, we may be fighting this battle for survival, alone, and then—would we ever be needing allies?

In one 700 feet long, five-year-old multiflora rose hedge in southeastern Iowa, thirty-five songbirds' nests were found—an average of one nest each twenty feet. This means a pair of adult birds really working on the insect problem every twenty feet on each side of the hedge. During the nesting season, the insects really didn't have a chance!

To make his farm plan really complete, each good conservation farmer provides that interspersed of little cover areas around over his farmland for his part of the mutual assistance pact he has with his nature allies!

And, oh yes, more of these areas interspersed around over the farmland area mean an increased number of game species, such as quail in the southern part of Iowa, pheasant in northern Iowa, rabbits anywhere in the state are benefited, not to mention songbirds, shrews, mink, skunks, squirrels, and many, many other forms of wildlife. Farms with good protected cover interspersed over them are usually excellent areas to hunt, for quail or pheasant, who in turn are hunting for insect pests, who in turn are hunting for the farmer's crops!

Say—who's doing this hunting anyhow?

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Henry Bartman (at right) with son Lawrence on Henry's farm in Columbia Township.

Henry Bartman, Conservationist

Henry has always been a conservation farmer. For twenty-two years he rented a farm in Compentine Township. Through the years he rearranged fields to better fit his system of terraces and contour farming, establishing multi-flora rose living fence on many of the contour field divisions.

It was not uncommon for new people in the community to assume that Henry owned the farm because of his efforts at improving and maintaining it to a degree somewhat unusual for a renter.

In 1954 Henry and his wife purchased 228 acres in Columbia

Township. It was in a low state of fertility and badly eroded. Already Henry has made great strides toward revamping his present farm. In the fall of 1954 and spring of 1955 Henry built 12,400 lineal feet of standard terraces. In addition, he has cleared brush and trees from about ten acres of land, filled in gullies and reshaped and seeded waterways.

Henry expects to build about 12,000 lineal feet of terraces again this year and establish additional waterways. He will continue that program until all his sloping land is "tied down."

Henry expects normally to carry about twenty-five beef cows and raise about 200 to 225 hogs.

The Bartmans have two children, Lawrence, who farms 170 acres in Pleasant Township and Mrs. Madison Deeds of Ottumwa.



Strip cropping on the Robert Singley farm near the west county line north of highway 2 northwest of Bloomfield.

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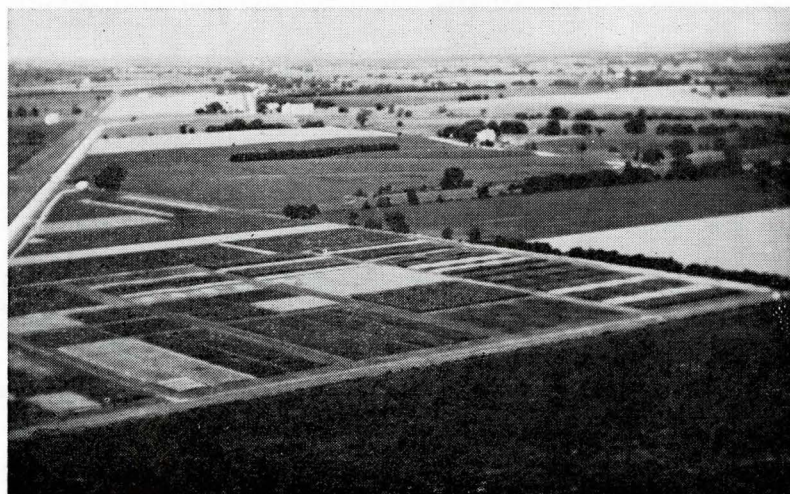
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Southern Iowa Experimental Farm



Aerial picture of the Southern Iowa Experimental Farm, located east of Bloomfield, Ia., on highway No. 2. The farm is owned by farmer shareholders and is operated by Iowa State College, with supervision from a local board of Directors. The District Commissioners were very instrumental in getting this farm established. Started in 1947, it is a beautiful well managed little farm. Harold Baughman Farmstead in background.

Davis Commissioners Sponsor Series of Conservation Schools

For the past eight years, Farmer Conservation Schools have been sponsored by the Davis Soil Conservation District. Subject matter such as Farm Outlook, summary of farm records for the previous year, new crop varieties, insect and rodent control, control and prevention of diseases in farm animals, rotations, soil treatments, permanent type soil and water conservation practices, summary of results of research and experimental work being carried out on the Bloomfield and other Experimental Farms, pasture renovation and results in meat and milk production, and land use adjustment, markets of

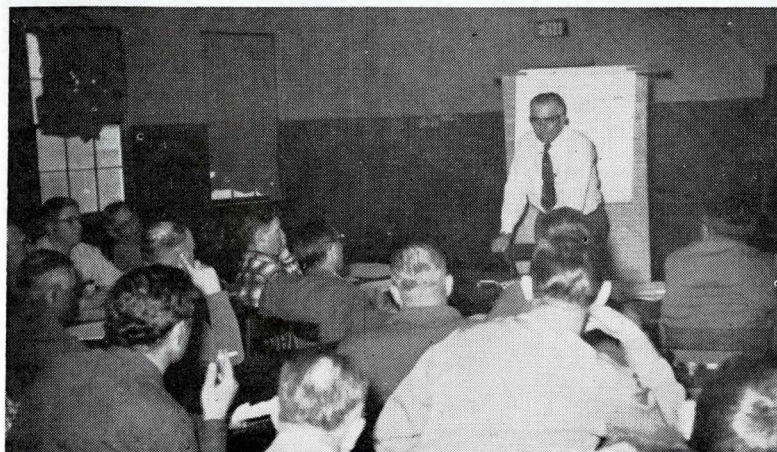
timber products, all of these subjects and many more all summed up into the basic farm plan.

All agricultural agencies participate in program arrangement at the request of the farmers and District Commissioners.

Attendance with few exceptions, when weather interferes, averages from thirty to over a hundred farmers.

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Chet Greenlee lectures a class on farm records, different farm enterprises, and results.

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Stanley Steele and J. R. Rukgaber, Extension Director, examining dense Reedcanary Grass sod in waterway.

Good Waterways Improve Land Use

In 1946, Stanley Steele, a prominent young farmer in Wapello County, returned from the armed forces and decided some work needed to be done on the home farm in the way of soil and water conservation. His first decision was on waterways. Stanley immediately set out to shape the waterway with a plow and disk and then proceeded to work them into a seed bed ending up by fertilizing with a fairly high nitrogen fertilizer, seeding it to Reed Canary grass with an end-gate seeder and then used the roller as a means to cover. The remainder of the field he seeded to oats and alfalfa. One year from planting, he had waterways like you see pictured. Note how Stanley covered the minor drainage areas as well as the major waterway, the saucer shape that was given to the base of the wa-

terway and the width of the waterway.

Stanley is planning on lodging some of the soil that might wash in from the neighbor's farm. Upon close examination of the turf, you will find that the Reed Canary grass has made a very dense growth which means very little possibility of erosion. Mr. Steele also pointed out that in some years he had trouble crossing the waterways with some equipment, in some cases the gullies were too deep, in other cases, the sod was not strong enough to carry heavy equipment. Now he has little trouble.

In addition to the soil and water conservation, Stanley is harvesting the Reed Canary grass either in the form of dry hay or as grass silage. This means some return each year from that area



View of waterway at lower end of field.

that was eroding away before he started his waterways. After Stanley had completed the establishing of Reed Canary grass waterways, he proceeded with terracing and although it may be questionable whether he needed the terracing on the area of less than five per cent slope, they were built with the thought in mind that he could intensify his rotation to two years of corn rather than one as it had been done in the past.

In 1948, he built more than a half mile of terraces. Stanley likes the broad based terraces and the sloping back so that they can be easily crossed at any point. He gives his terraces about 18 inches of height and he has never had one break over.

The work that Stanley has done was on the home farm and Stanley is now engaged in establishing similar waterways and conservation measures on the farm of his own that he bought in 1950.

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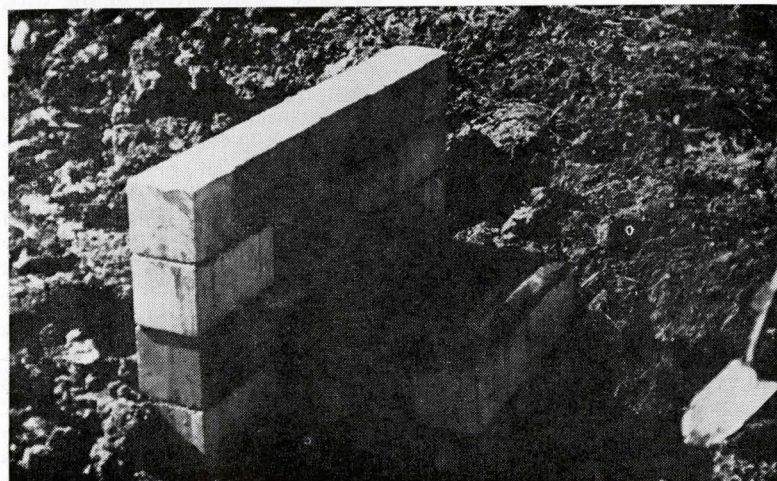
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Before and after picture of a large gully on the F. H. Lauder farm.



The riser of a drop inlet erosion control structure on the F. H. Lauder farm that was installed in 1954.

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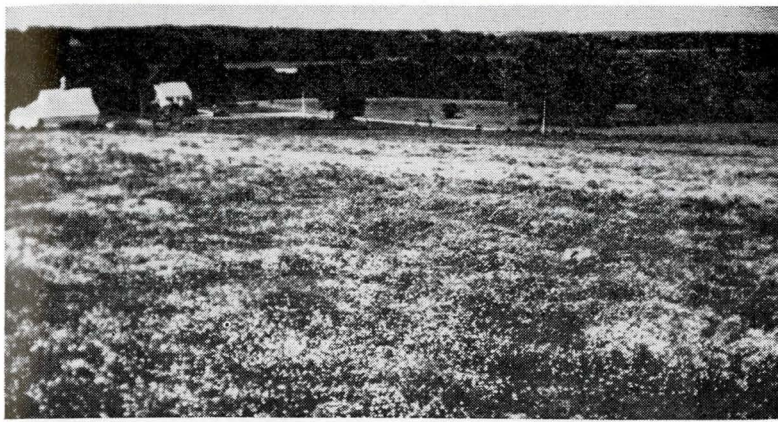
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Birdsfoot trefoil on the D. H. Lowe farm ½ mile north of Lake Wapello.

Pasture Renovation Necessary

While at the present time we may have too much livestock on farms over the state and out of balance as to kinds, we do not have enough good pasture for them to eat. Yes, "they stay alive" a farmer remarked, and produce a lamb or calf but fail to maintain their own body weight. Most roughage consuming animals should get enough to eat in 30 minutes to one hour on good

pasture. Under these conditions, they will give you the most economical gain, greatest amount of milk, meat or wool.

Methods of seeding, fertilizing, liming, seed mixture and management are important. Location of water supply in relation to pasture fields is another very important part of a good pasture program.

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Extension Service Aids District In Land Conservation Education

The Davis County Extension program is planned and conducted under the direction of the Davis County Extension Council. This council is made up of an elected member from each township. The elections are held in each township in November and everyone who is an eligible voter of this county is encouraged to come and vote for the council member of their choice in their township. The Extension program is developed by committees made up of Davis county people in the following areas: livestock, crops, soils, farm management, youth, community development, and family living. The committees in these various areas design a program which they think will do the most effective jobs of getting information to the people of the county on these subjects. The methods involved are usually left up to the extension office personnel pictured above. Typical methods used to get facts to people are: (1) Open meetings on various subjects (2) newspaper, radio and TV (3) Training leaders so they may give lessons to smaller groups (4-H work is a good example of this) (4) Personal contacts both in the extension office and on the farm.

All of the latest information which comes from state colleges and experimental stations as well as USDA experimental work is made available through the above channels. The extension service cooperates and works with other state and governmental agencies such as Soil Conservation Service, FHA, ASC, and the Soil Conservation District Commissioners in carrying out the various services to the people

of Davis county. These groups in turn assist the extension service in the field of information and education.

Women's work under the Extension Program is given special consideration by the Family Living Program planning committee. Chosen by the County Extension Council these representatives of the areas meet—discuss—and plan programs in which interest and need is shown.

Programs may be in such areas as: child development and family life, nutrition, clothing, home ground beautification, work simplification, recreation and music, gardening, and family economics.

4-H work on the county level is governed by the county 4-H committees. These policy-making groups work with the county 4-H officers in planning and carrying through county 4-H events. These events include—Annual banquet, parties, girls' Rally, Health clinics, and 4-H events at the county Fair.

The County Home Economist and County Extension Director give local club leaders special training and help to improve the local as well as the County 4-H program.

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A gully head on the F. H. Lauder farm that was cutting back into valuable cropland and was ruining the roadway to bottom cropland.



J. R. Rukgaber, Extension Director, and Stanley Steele examining waterways.

Newspaper Award Winners for 1955

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Newspaper Award Winners for 1955—left to right: Keith Hawk, Editor of Bloomfield, Ia. newspapers, James Melvin, Kenneth McCormick and Russell Wuthrich.

PELHAM AND PECK ARE PIONEERS IN EARTH-MOVING COMPANY

Pete Pelham has been doing earth-moving work directly connected with soil and water conservation since 1936—five years before the Wapello District was organized. Bill Peck has been at it since 1949. Both men had many years' earth-moving experience before this. In 1952 they merged their interests and have been operating as a team ever since.

They have two D-7 "bulldozer" outfits, a two-ton brush land disc, and their own tractor-trailer unit. Over the years, they have successfully built up a large following of satisfied customers among farmers in Wapello and Davis Counties.



Installation of the pipe on the Lauder farm in the same location of the gully head in previous or above picture. This picture shows the cement block riser, metal cut off wall or anti-seep collar and the post for the propped outlet.

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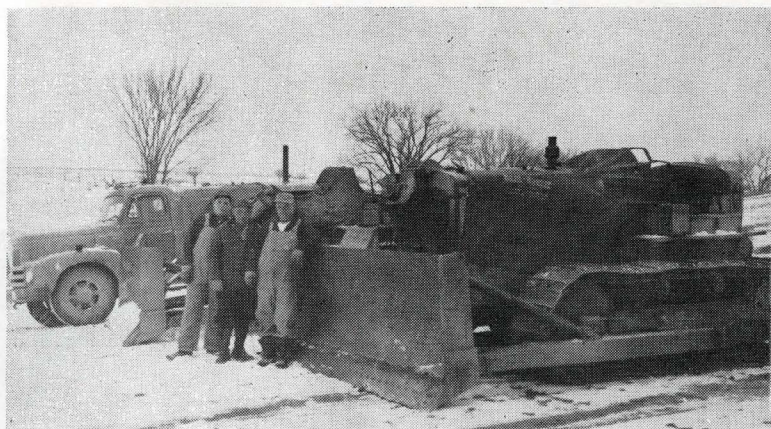
Harlan, Iowa

IOWA SOIL AND WATER

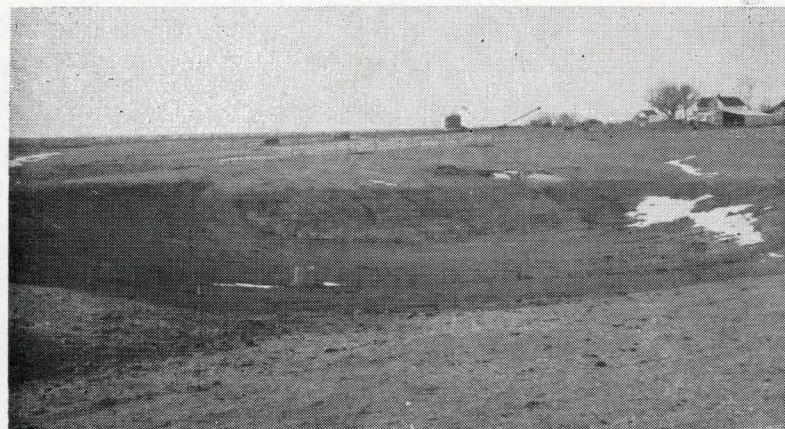
Pete
Pelham

Bill
Peck

*Ponds -- Conservation Work -- Brush Clearing
Diversion Terraces*



Right to left are earth moving contractors Bill Peck and Pete Pelham; at left is Max Peck, Bill's son, who acts as relief dozer operator.



This is a recently completed farm pond on the Russell Warner farm, built by Pelham. In addition to the pipe through the earth fill, a deep cistern with connecting sand filter was built off to one side.

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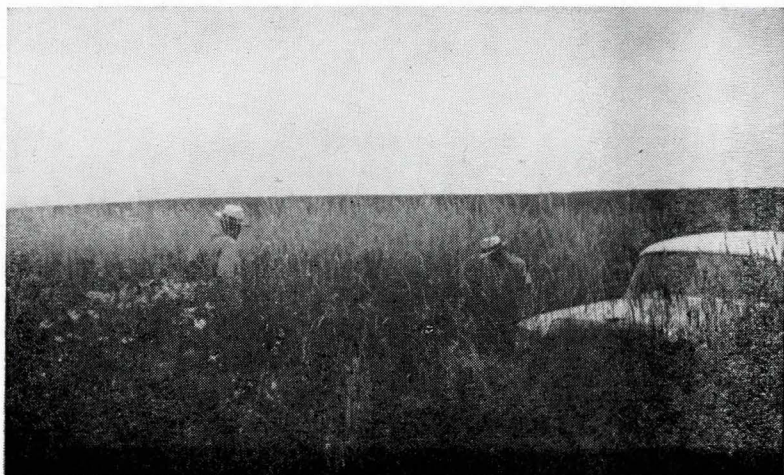
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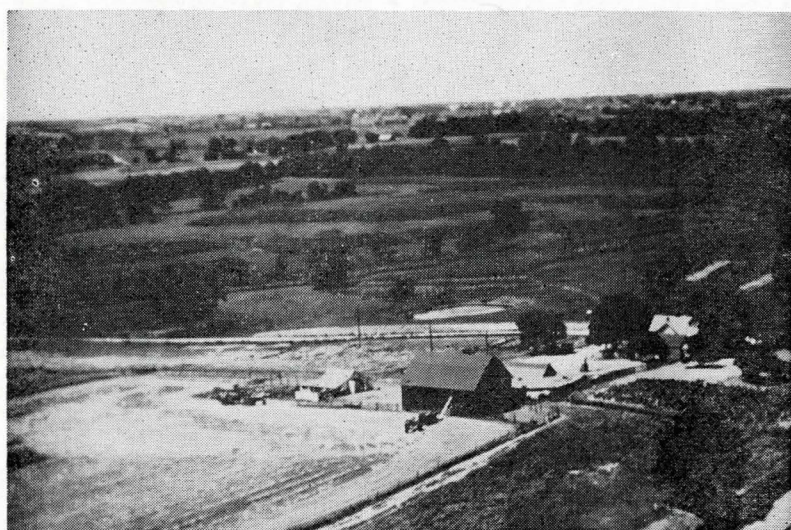
Southeastern Iowa Employs a Variety of Methods to Conserve Its Resources



Commissioner Spilman and Commissioner Blackwell inspecting a reeds Canary Grass waterway on the Alvin Baughman farm.



Strip cropping and grass waterways on the D. Harper farm near West Grove, Ia.



A view of the LaVern McMain Farmstead near Mark, with a pond and strip cropping in the background.



This is not a picture from the Orient but a strip cropping layout on the Kenneth McCormick 280 farm southeast of Floris, Ia.



Jack Chamberlain, conservation aid assisting Carl De Vault and O. O. Roberts with their wildlife packets and Rose fence plants, just received from the State Conservation Commission Nursery, Ames, Ia.

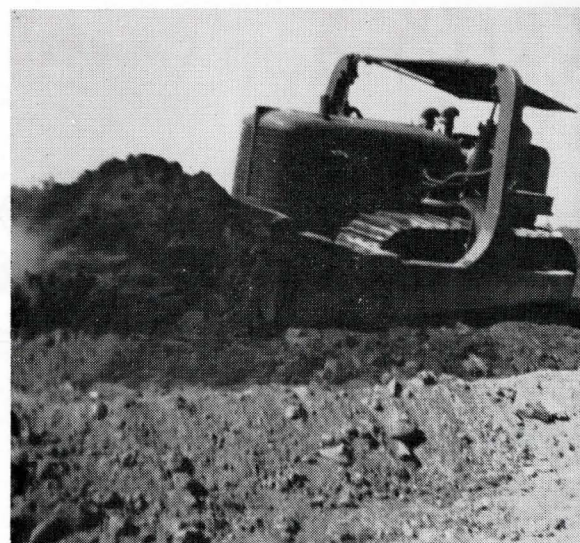


Strip Cropping on the Wendell Micklin farm northeast of Bloomfield.

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Recipe for *Ruining*

A Farm

Cut one medium size farm into square pieces.

Add successive crops to remove organic matter.

Stir the thin layer of topsoil frequently to encourage the soil particles to be carried off by the next wind or rain.

Allow plowpan to form, and burn crop residues if necessary to leave surface bare.

Carefully run the rows up and down the slopes so that the raindrops can get away in a hurry, taking precious topsoil with them.

Repeat until the dark color disappears and subsoil shows.

Stuff native pastures with as many cattle as gate can be closed on, to insure rapid destruction of all good grasses and develop bare surfaces to stimulate washing and blowing.

Then allow deep, irregular gullies to form and leave the surface exposed to the sun to bake.

Season with an unpainted house, broken down fences, some old machinery and an old barn.

Repeat the process for a few years or until the farm is ready to be abandoned.

Recipe for *Saving*

A Farm

Apply to your Soil Conservation Districts for assistance.

Obtain the assistance of a trained conservationist to help you determine the best use that can be made of each acre within the limits of its capability.

Carve farm into pieces on lines determined by land capability classes.

Seed native grasses on areas that can no longer be safely kept in cultivation.

Add cover crops and legumes to cropping system and apply to all cultivated areas.

Stir soils with implements that allow crop residues to remain on surface to prevent erosion and increase intake of water.

Mold crust into terraces where necessary to control erosion.

Spread cover of perennial grasses over surface of all waterways.

Apply "take half-leave half" rule to native pastures.

Sprinkle with water facilities for livestock convenience.

Season with well-painted farm buildings, good fences and fat livestock.

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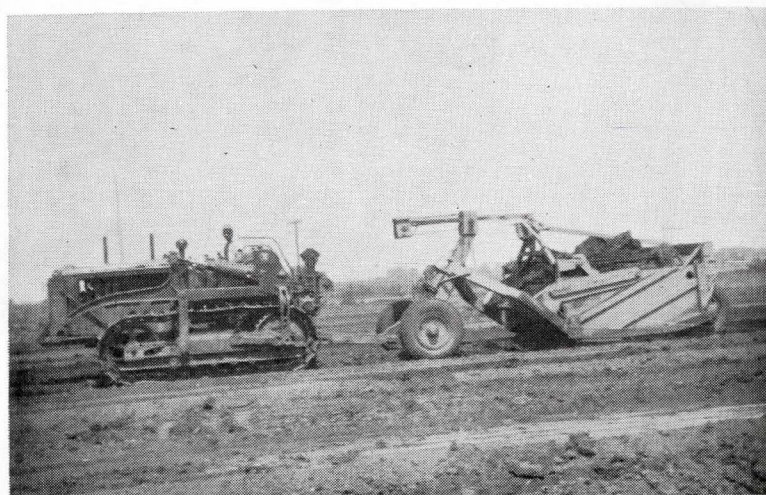
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Dave Moore with his bulldozer.



Jack Glick operating his earth scoop.

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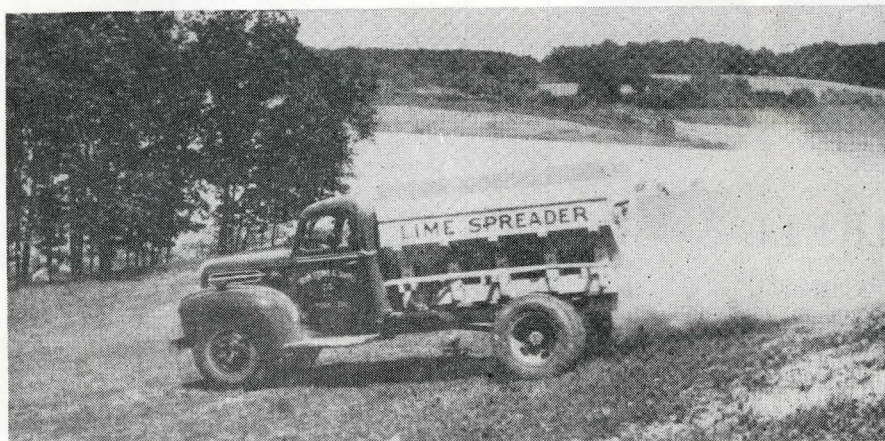
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