The View from Coon Creek

A Century of Agricultural Conservation

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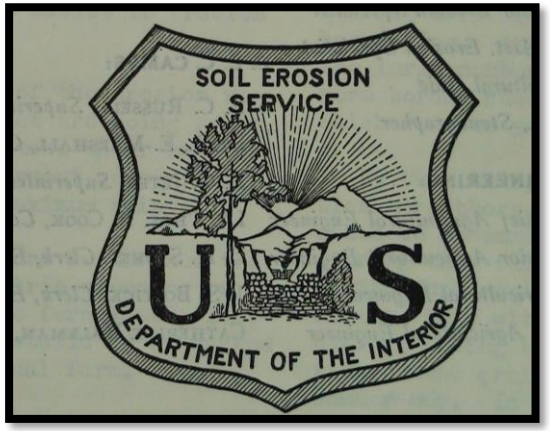
Agenda

I. Book origins & research
II. Main idea
III. Overview with Driftless examples
IV. Q&A

Origins

How and why have American farmers practiced conservation?



1933-35

1935-94

NRCS
Natural Resources Conservation Service

1994-pres.

Archives visited:

Appeared in *Saturday Evening Post*, *Newsweek*, *Time*, and *US News & World Report*

(April 1960)

Can we double our water supply...and quickly?

In the next 15 years our population will increase almost 60 million. To support this population growth and to maintain our standard of living, we will need to almost double our present water supply. Can it be done?

All too recently in the Southwest a black blizzard of dust chokes off crops, kills cattle, reduces thousands of acres of fertile farm and grasslands to shifting sand.

And suburbanites around Chicago, almost within sight of Lake Michigan, are asked to stop lawn sprinkling.

One fourth of our people are suffering from a water shortage or poor quality water.

Yet as regular as spring, each year major river valleys are ravaged by floods.

Water... either too little or too much. Rarely just enough.

Fortunately, rainfall provides more than enough water for our present and future needs. But 90% to 95% runs off.

Controlling and conserving this water is a big and complex job. It is the farmer terracing his land. It is giant reservoirs for New York and reforestation in the mountains. It's flood control levees and navigable rivers. It's industry and power and a place for a swim.

We are attacking the problem from many fronts. The Small Watershed Program is a good example. This is a co-operative endeavor of federal, state and local governments and of farm and city people living in a common watershed.

Where this program is under way you see powerful Caterpillar earthmoving machines . . . building farm ponds, diversion terraces and multi-purpose reservoirs.

Behind them they leave improved farms, more recreational areas, reduced danger of floods, better water supply.

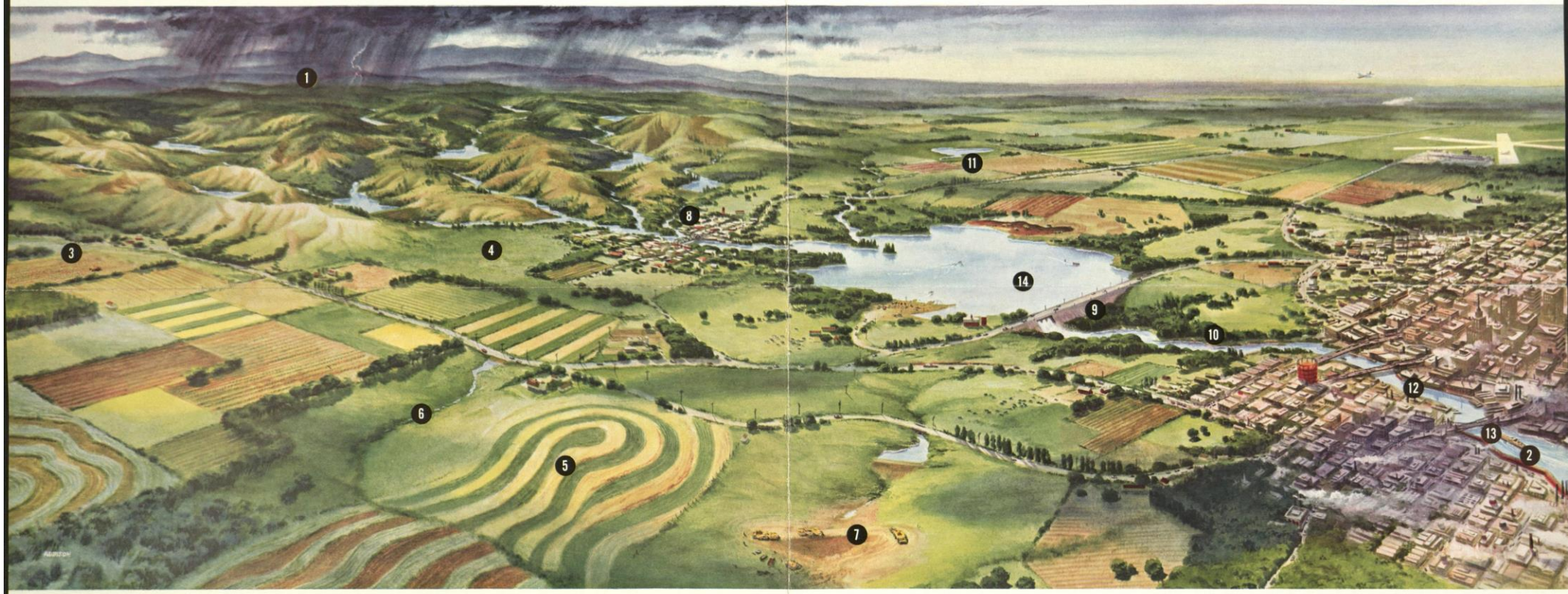
But much more water management is needed if we are to quench the fast-growing thirst of our nation. The water problem is a job for all of us. After all, if we don't solve it . . . who will?

Caterpillar Tractor Co., General Offices, Peoria, Illinois, U.S.A.

CATERPILLAR

DIESEL ENGINES • TRACTORS • MOTOR GRADERS
EARTHMOVING EQUIPMENT

MACHINES THAT BUILD FOR A GROWING AMERICA

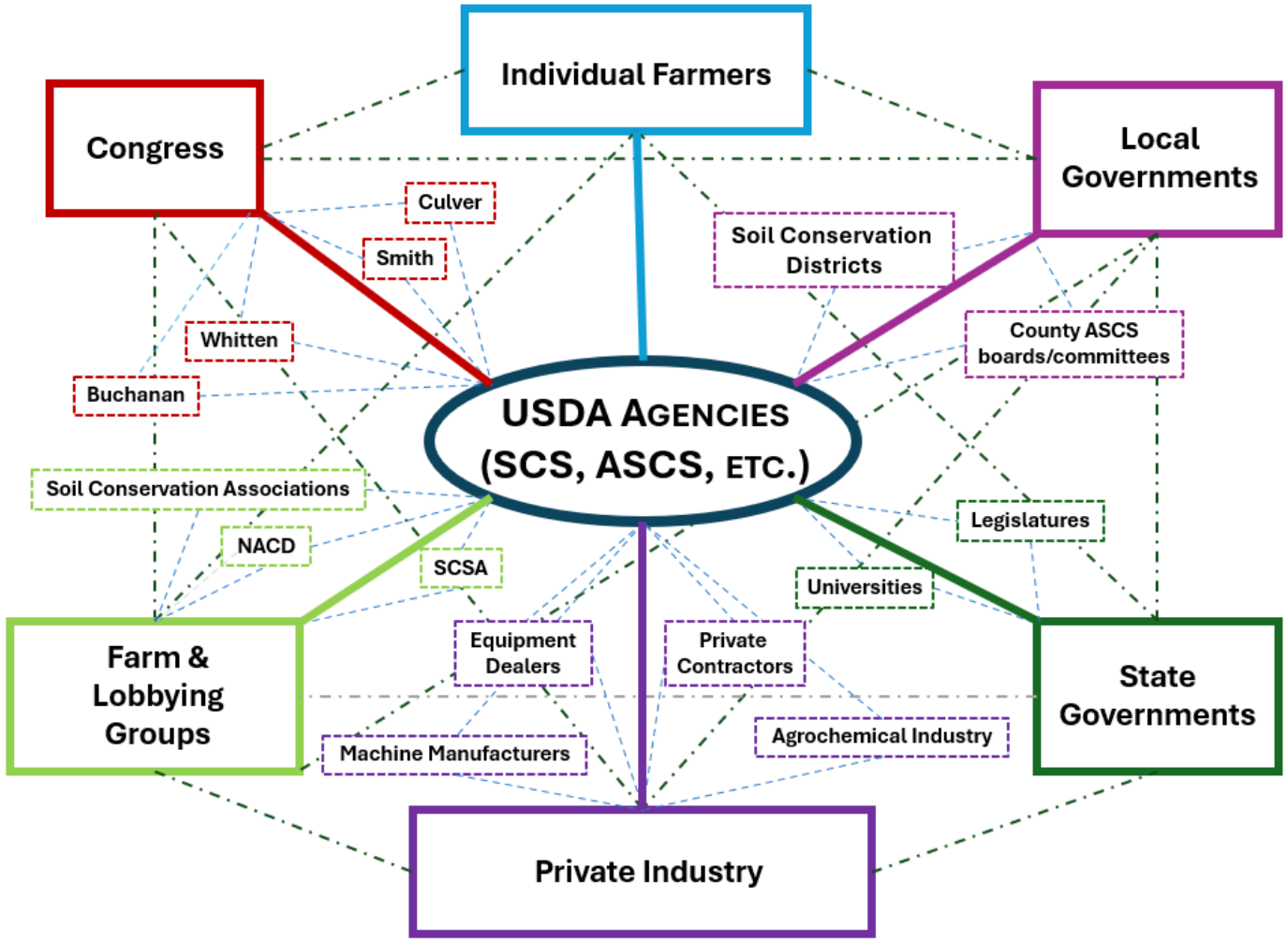


IT STARTS WITH A RAINDROP. Perhaps up in the mountains **(1)**. And it ends in a river or a sea **(2)**. In between to control and store our water supply, we need to replant and manage forests **(3)** and grasslands **(4)** to hold back the rainfall and release it slowly to streams or underground reserves. Contour plowing and terracing **(5)** and diversion terraces and grass waterways **(6)** help prevent excess water from eroding valuable topsoil. Farm ponds **(7)** collect and store water for dry periods. All these projects help conserve water and prevent springtime flooding of river communities **(8)**. Multi-purpose downstream dams **(9)** and levees **(10)** also control excess runoff, prevent floods. From the reservoirs comes water for large cities. Result: farmers have water for irrigation of crops **(11)**. Industry has water for production **(12)**. Inland navigation becomes possible **(13)**. We all enjoy more recreational facilities **(14)**.

April 18-20, the 7th National Watershed Congress will meet in Washington, D. C., to work on the many problems of water and soil conservation. We know you join us in saluting the delegates and wishing them success. This advertisement, seventh in a public service, appears in NEWSWEEK and U. S. NEWS & WORLD REPORT, April; TIME, April; and SATURDAY EVENING POST, April. We welcome your letters of comment.

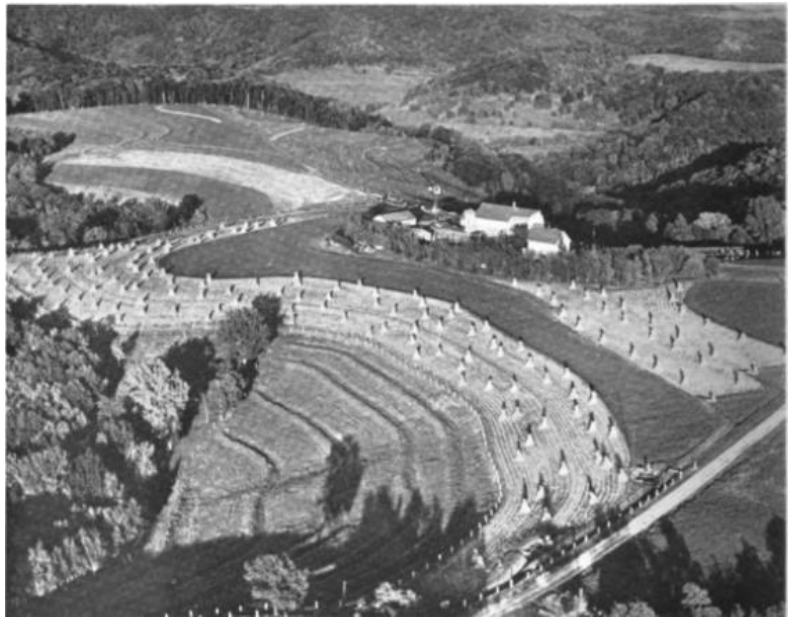
Robert is six months old. When he is 16 years our nation must have . . . tens of thousands of miles of new highway • almost double our present water supply • double our school facilities • 20 million new homes • 20% of our present housing rebuilt • 2½ times more oil • 60% more lumber production and double today's pulpwood production • 55% more metal ores • soil conservation on 1,159,000,000 acres • 123,300 new dams, many miles of levees • double our present hospital facilities • triple our electric power.

The Conservation-Industrial Complex

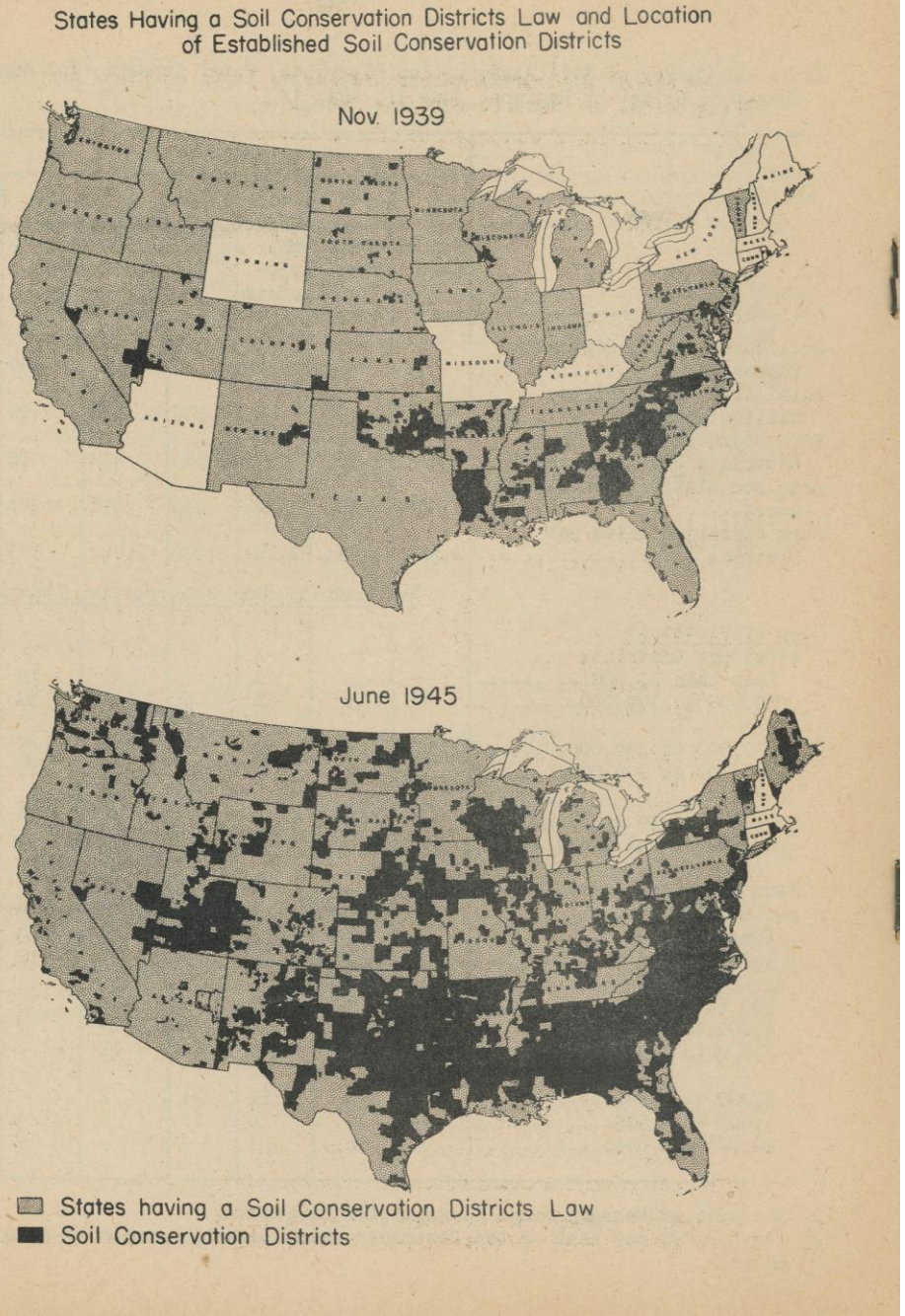


- Network of public-private partnerships
- Decentralized
- Self-perpetuating
- Shared interests in soil and water conservation
  - Ideological: voluntary stewardship, "free enterprise," corporate PR, greenwashing, etc.
  - Material: control erosion & floods, sustain industrial ag, boost profits, serve constituents, etc.



Top (left to right): overgrazed hillside (La Crosse County, 1936); large gully (Alma, WI, 1920s-30s); roadside erosion (Melrose, WI, 1937).
Bottom (L to R): USDA conservation experiment station (La Crosse, 1942); contour strip-cropping with a rotation of corn, grain, alfalfa, grain, alfalfa (Westby, 1937); CCC workers quarrying limestone (Vernon County, 1939)



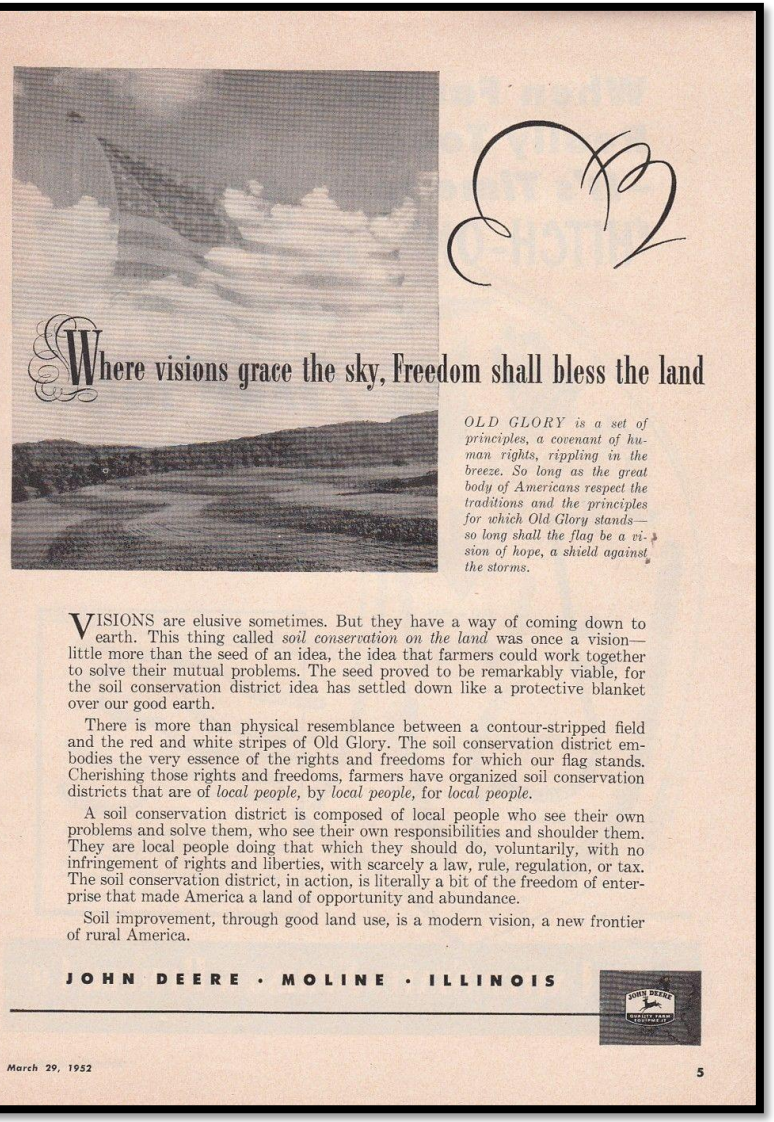
Left:
Spread of soil conservation districts, 1939-45

Right:
Office of War Information propaganda poster linking soil conservation to the war effort (1944)

Harvester World, International Harvester's Magazine (Dec. 1944)

June, 1944, 22 Harvester men from the general office and branches joined 11 SCS men on a two-day field inspection at the Upper Mississippi Soil Conservation Experiment Station, La Crosse, Wisconsin, and neighboring farms in the La Crosse County Soil Conservation district. Studying the conservation program at first hand strengthened Harvester cooperation.

John Deere advertisement (March 1952)



Where visions grace the sky, Freedom shall bless the land

OLD GLORY is a set of principles, a covenant of human rights, rippling in the breeze. So long as the great body of Americans respect the traditions and the principles for which Old Glory stands—so long shall the flag be a vision of hope, a shield against the storms.

VISIONS are elusive sometimes. But they have a way of coming down to earth. This thing called *soil conservation on the land* was once a vision—little more than the seed of an idea, the idea that farmers could work together to solve their mutual problems. The seed proved to be remarkably viable, for the soil conservation district idea has settled down like a protective blanket over our good earth.

There is more than physical resemblance between a contour-stripped field and the red and white stripes of Old Glory. The soil conservation district embodies the very essence of the rights and freedoms for which our flag stands. Cherishing those rights and freedoms, farmers have organized soil conservation districts that are of *local people*, by *local people*, for *local people*.

A soil conservation district is composed of local people who see their own problems and solve them, who see their own responsibilities and shoulder them. They are local people doing that which they should do, voluntarily, with no infringement of rights and liberties, with scarcely a law, rule, regulation, or tax. The soil conservation district, in action, is literally a bit of the freedom of enterprise that made America a land of opportunity and abundance.

Soil improvement, through good land use, is a modern vision, a new frontier of rural America.

JOHN DEERE · MOLINE · ILLINOIS

March 29, 1952 5

John Deere advertisement (July 1949)

Farm Implement News—July 14, 1949 Page 3

Farmers can eat their cake

...and have it, too!

Yes, modern conservation practices soon begin to repay their cost—enable farmers to eat their cake and have it, too. Controlling erosion helps to hold precious topsoil on the land and, at the same time, hoists farming profits.

Contouring, terracing, strip-cropping, and other soil-saving operations, which can be practiced with regular John Deere farm equipment, mend mismanaged or erosion-scarred land. Grasses and legumes, together with agricultural limestone and commercial fertilizers, rebuild soil productivity in a hurry. This double-barreled program, recommended by agricultural authorities, enables soil conservation farmers to improve their places and, at the same time, raise bigger yields and enjoy better incomes than ever before.

Soil conservation, however, is more than a remedy for ailing acres or a recipe for bigger profits. It's a gilt-edged investment in America. By making our agriculture more stable and productive, modern soil conservation practices help to maintain our economic well-being and safeguard our national security.

JOHN DEERE MOLINE, ILL.

The Rise of the Conservation-Industrial Complex (1940s-50s)

TABLE 1 Changes in US farm number, size, and population relative to total US population, 1910–2017

	Farm population		Farms	
Year	Total (rounded to nearest thousand)	Percent of total US population	Number (rounded to nearest thousand)	Average farm size (in acres)
1910	32,077,000	34.9	6,366,000	139
1915	32,440,000	32.4	6,458,000	142
1920	31,974,000	30.1	6,454,000	149
1925	31,190,000	27	6,372,000	145
1930	30,529,000	24.9	6,295,000	157
1935	32,161,000	25.3	6,812,000	155
1940	30,547,000	23.2	6,102,000	175
1945	24,420,000	17.5	5,350,000	195
1950	23,048,000	15.3	5,388,000	216
1955	19,078,000	11.6	4,654,000	258
1960	15,635,000	8.7	3,962,000	297
1965	12,363,000	6.4	3,356,000	340
1970	9,712,000	4.8	2,954,000	373
1974	9,264,000	4.4	2,314,000	440
1978	n/a	n/a	2,258,000	449
1982	5,618,000	2.5	2,241,000	440
1987	5,618,000	2.5	2,088,000	462
1992	n/a	n/a	1,925,000	491
1997	n/a	n/a	1,912,000	487
2002	5,717,000	2	2,129,000	441
2007	5,798,000	2.1	2,205,000	418
2012	5,853,000	1.9	2,109,000	434
2017	6,577,000	2.1	2,042,000	441

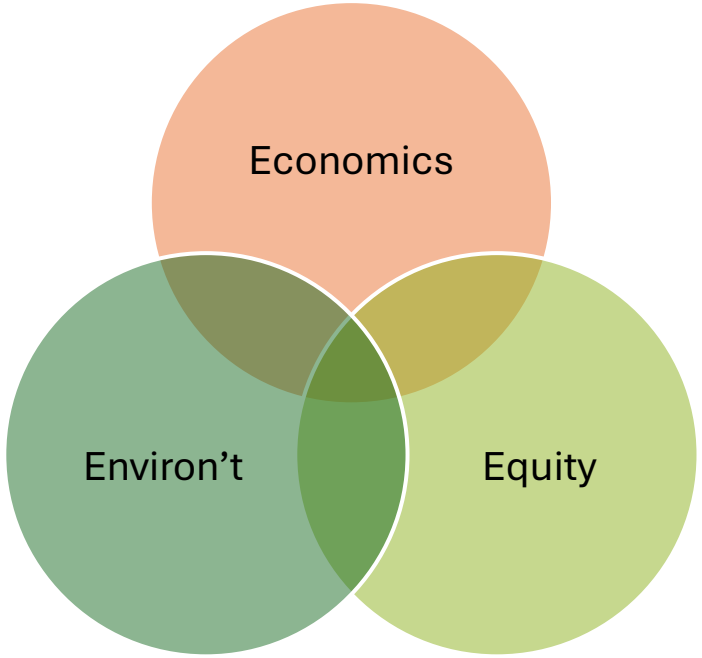
20TH-CENTURY US FARM EXODUS:

A Major Demographic Transformation

- Role of agricultural conservation:
  - Contributes (expensive methods)
  - Reflects (relationships in industrial ag)
  - Justifies (good for nature)

The Meaning of Conservation

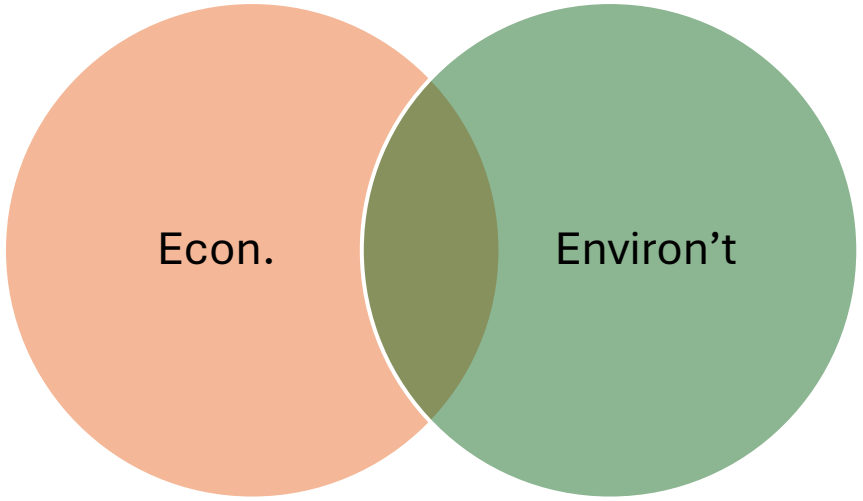
1930s



"Every lick of [soil conservation] is at the same time an effort in the…conservation of the human resource." (1940)

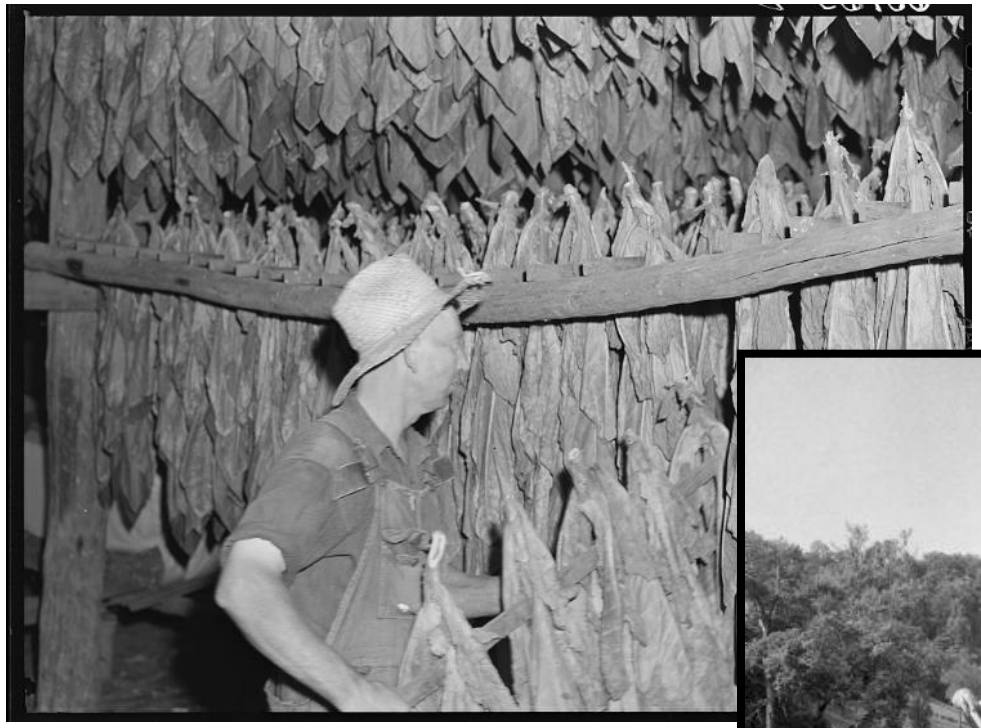
Hugh Hammond Bennett

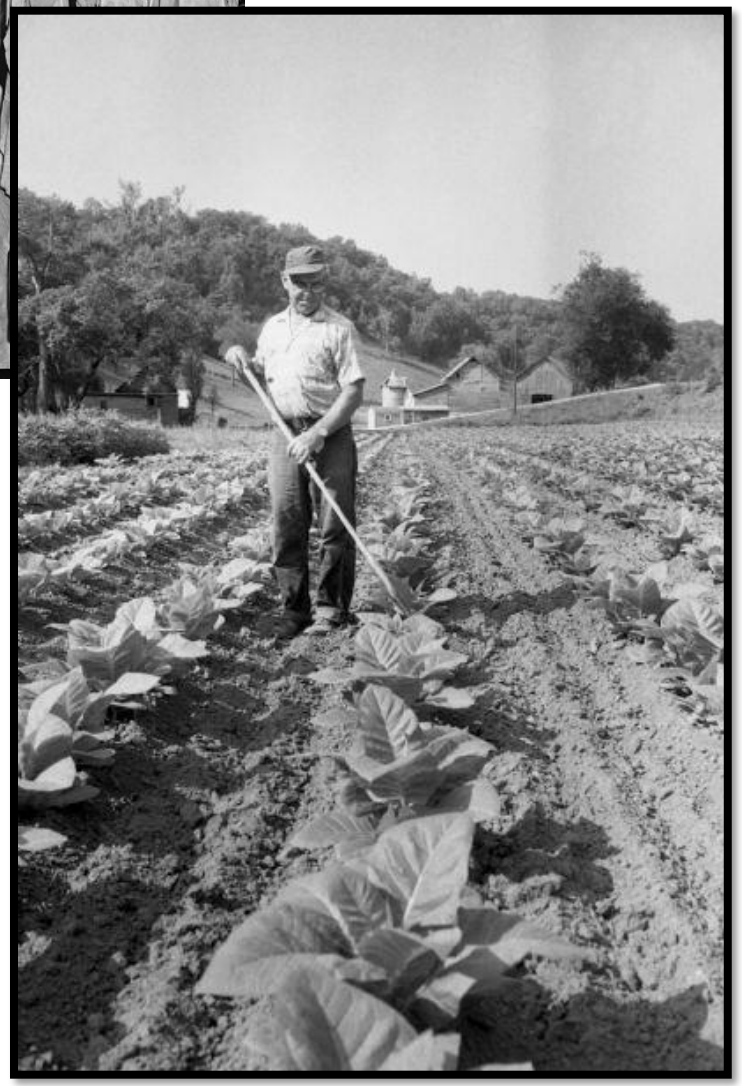
1940s-pres.



"The inexpert and the inept will be forced off the land." (1946-47)

Tobacco:
A stay-small strategy at odds with strip-cropping





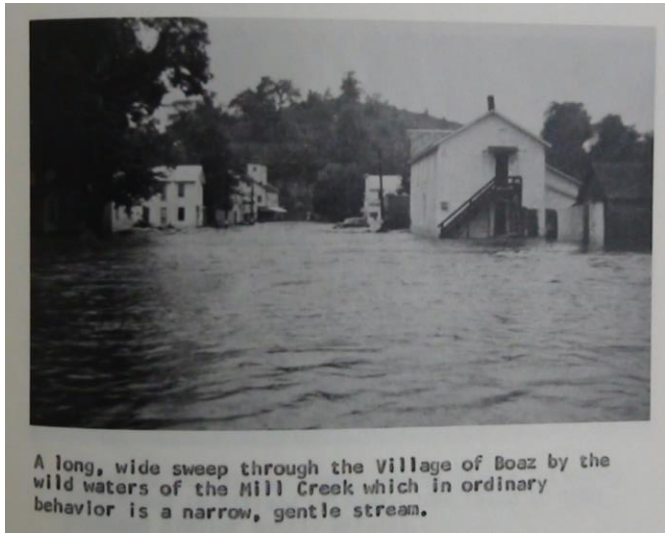
Top: Dane County tobacco farmer (Sept. 1939)

Right: La Farge (Vernon County) farmer weeding a tobacco field (June 1968)

"No matter that hay was dry in the windrow ready to bring in, if the tobacco land needed attention, it came first. If rain came and ruined the hay, the tobacco grower cursed his luck and continued to genuflect to his tobacco crop."

- Roy Dingle, SCS Conservationist for Richland County, Wisconsin, in his memoir, *Nothing but Conservation* (1991)

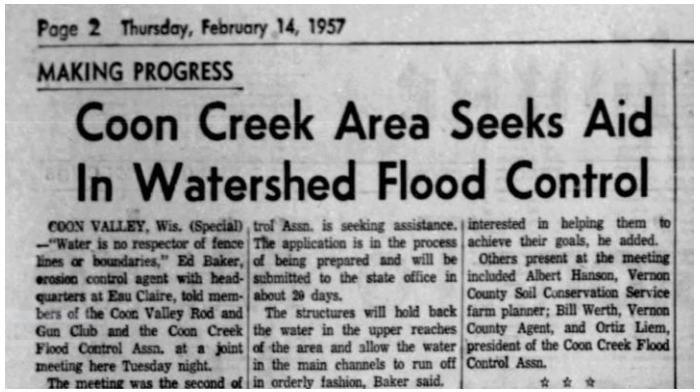
Deep and swift currents through the Village of Boaz during 1951 flood, which were duplicated in 1954.



A long, wide sweep through the Village of Boaz by the wild waters of the Mill Creek which in ordinary behavior is a narrow, gentle stream.

Top: Flood damage in Boaz, WI (1951)

Right: *La Crosse Tribune* (Feb. 14, 1957)



Page 2 Thursday, February 14, 1957

MAKING PROGRESS

Coon Creek Area Seeks Aid In Watershed Flood Control

COON VALLEY, Wis. (Special) —"Water is no respector of fence lines or boundaries," Ed Baker, erosion control agent with headquarters at Eau Claire, told members of the Coon Valley Rod and Gun Club and the Coon Creek Flood Control Assn. at a joint meeting here Tuesday night.

The meeting was the second of

trol Assn. is seeking assistance. The application is in the process of being prepared and will be submitted to the state office in about 20 days.

The structures will hold back the water in the upper reaches of the area and allow the water in the main channels to run off in orderly fashion, Baker said.

interested in helping them to achieve their goals, he added.

Others present at the meeting included Albert Hanson, Vernon County Soil Conservation Service farm planner; Bill Werth, Vernon County Agent, and Ortiz Liem, president of the Coon Creek Flood Control Assn.

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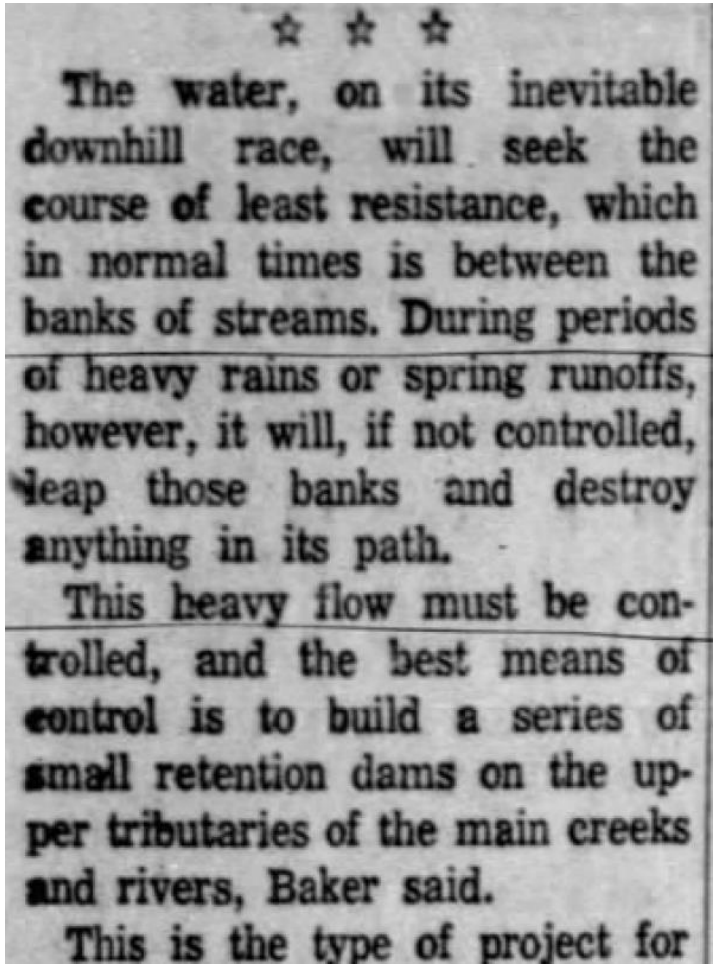

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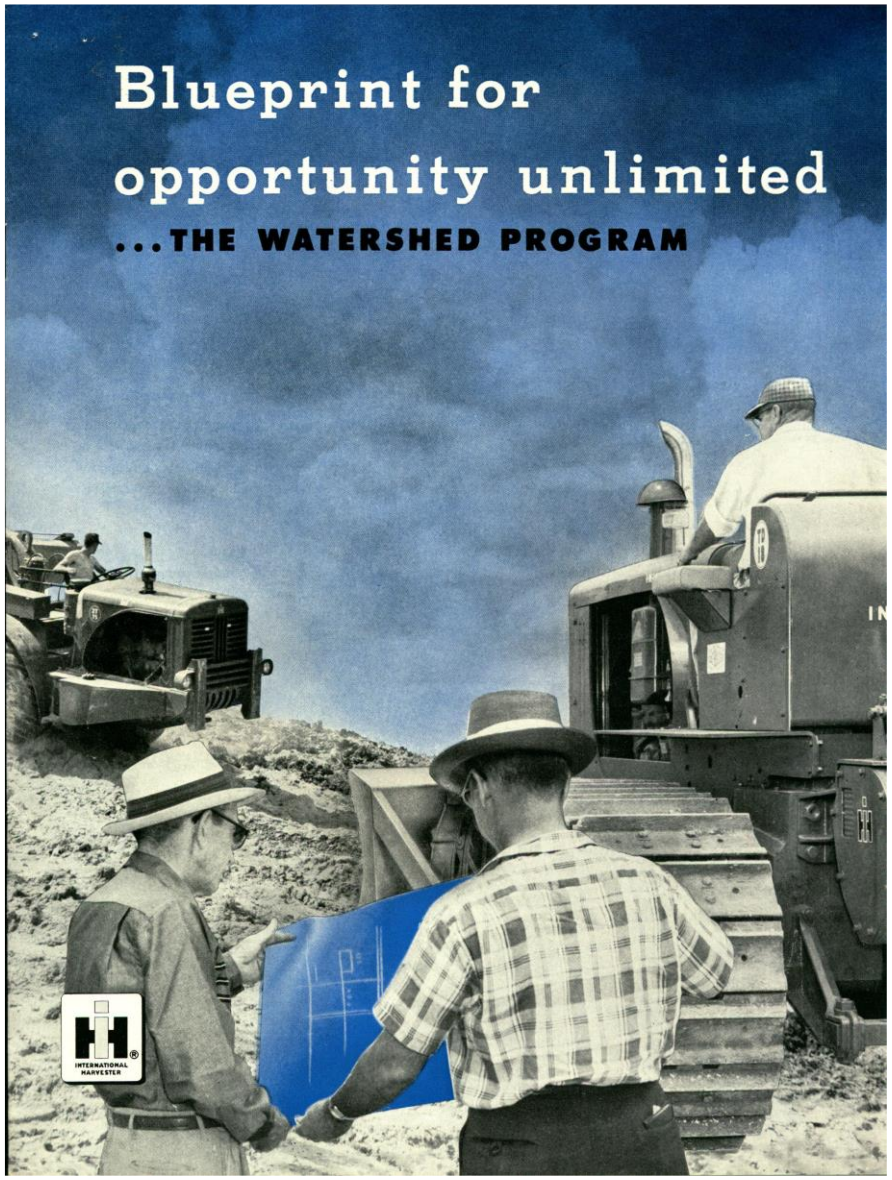
The water, on its inevitable downhill race, will seek the course of least resistance, which in normal times is between the banks of streams. During periods of heavy rains or spring runoffs, however, it will, if not controlled, leap those banks and destroy anything in its path.

This heavy flow must be controlled, and the best means of control is to build a series of small retention dams on the upper tributaries of the main creeks and rivers, Baker said.

This is the type of project for

PL 566

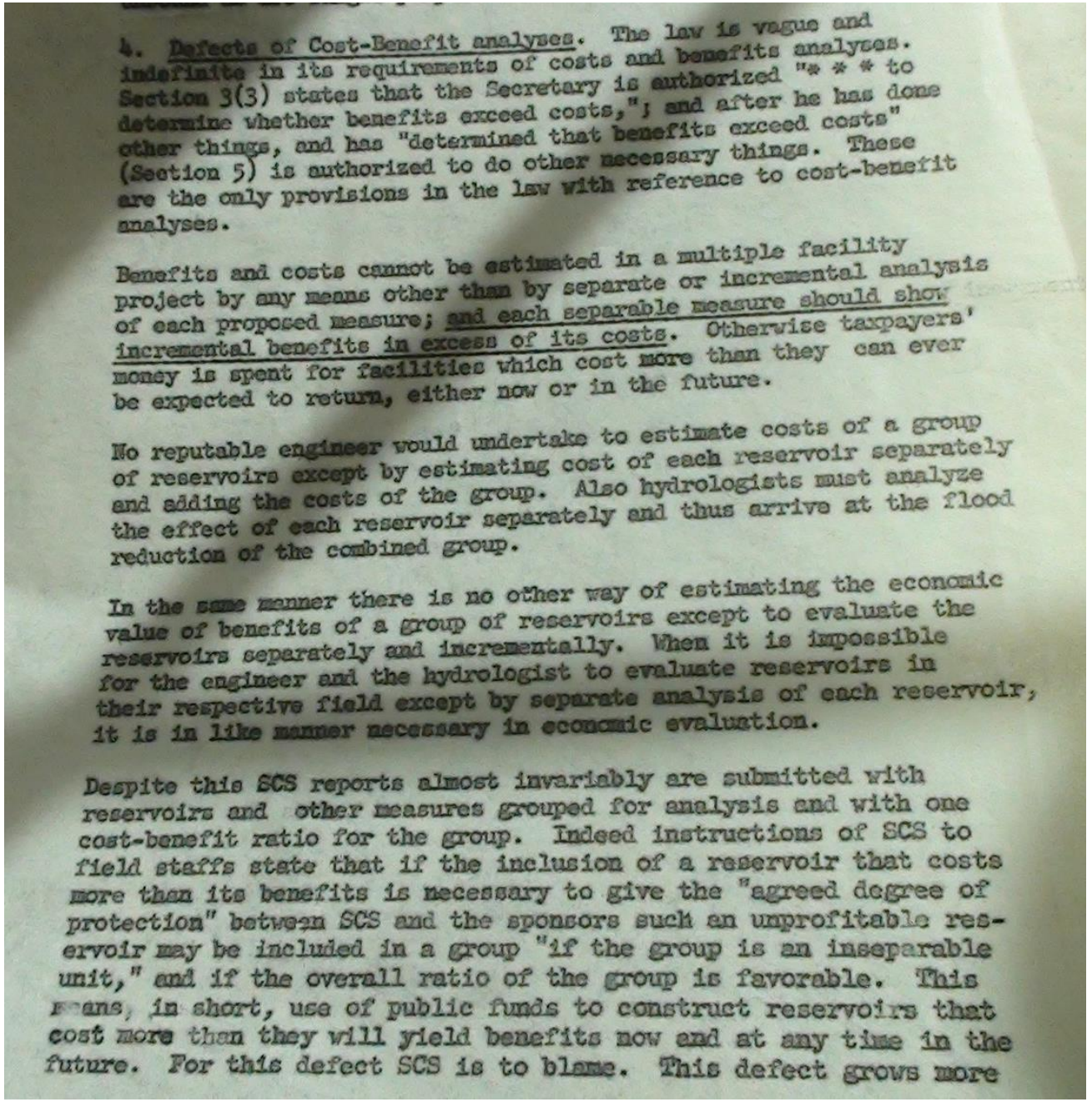


International Harvester booklet (1957)

Small Watershed and Flood Prevention Program (est. 1954)			
	Number	**Acreage**	**Equivalent Area**
Approvals (1954-59)	200	12.5 M acres	Maryland, Delaware, New Jersey
Applications (1954-59)	1,204	86 M acres	Maryland, Delaware, New Jersey + Pennsylvania, New York, Massachusetts, Vermont, & New Hampshire

Data source: Charles H. Lloyd, "Progress in Watersheds for Conservation and Flood Prevention," *Soil Conservation* 25 (December 1959): 105

Source: Unpublished report on PL 566 commissioned by Agricultural Research Service (1961). Author: J. T. Sanders.



4. Defects of Cost-Benefit analyses. The law is vague and indefinite in its requirements of costs and benefits analyses. Section 3(3) states that the Secretary is authorized "* * * to determine whether benefits exceed costs,"; and after he has done other things, and has "determined that benefits exceed costs" (Section 5) is authorized to do other necessary things. These are the only provisions in the law with reference to cost-benefit analyses.

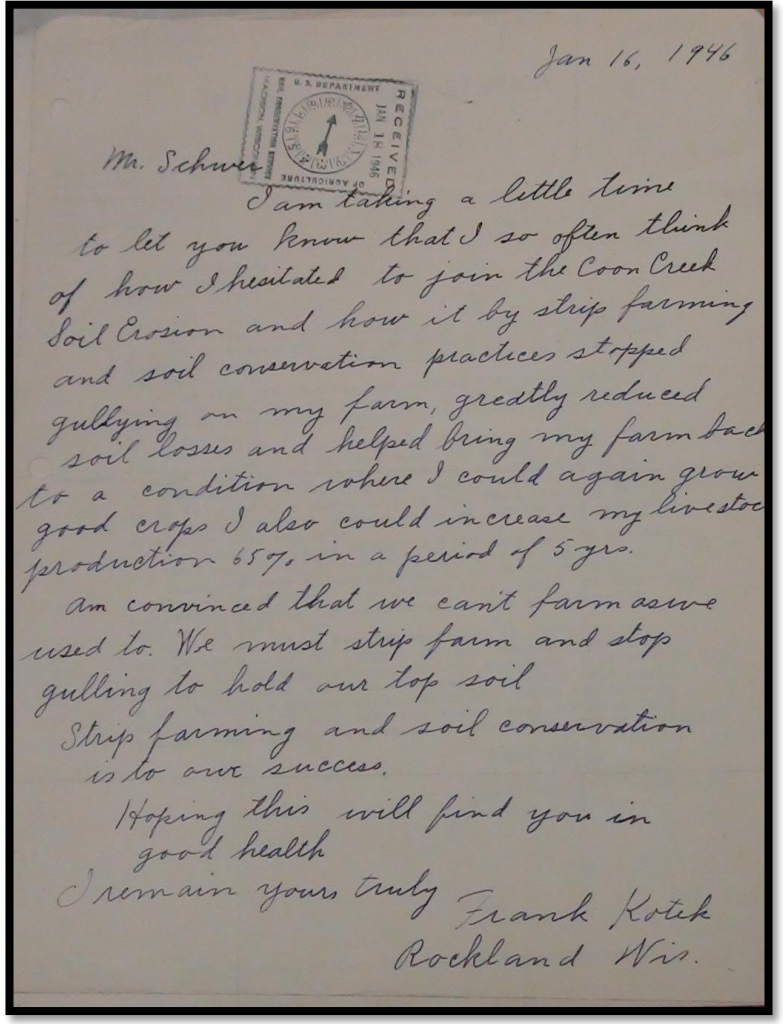
Benefits and costs cannot be estimated in a multiple facility project by any means other than by separate or incremental analysis of each proposed measure; and each separable measure should show incremental benefits in excess of its costs. Otherwise taxpayers' money is spent for facilities which cost more than they can ever be expected to return, either now or in the future.

No reputable engineer would undertake to estimate costs of a group of reservoirs except by estimating cost of each reservoir separately and adding the costs of the group. Also hydrologists must analyze the effect of each reservoir separately and thus arrive at the flood reduction of the combined group.

In the same manner there is no other way of estimating the economic value of benefits of a group of reservoirs except to evaluate the reservoirs separately and incrementally. When it is impossible for the engineer and the hydrologist to evaluate reservoirs in their respective field except by separate analysis of each reservoir, it is in like manner necessary in economic evaluation.

Despite this SCS reports almost invariably are submitted with reservoirs and other measures grouped for analysis and with one cost-benefit ratio for the group. Indeed instructions of SCS to field staffs state that if the inclusion of a reservoir that costs more than its benefits is necessary to give the "agreed degree of protection" between SCS and the sponsors such an unprofitable reservoir may be included in a group "if the group is an inseparable unit," and if the overall ratio of the group is favorable. This means, in short, use of public funds to construct reservoirs that cost more than they will yield benefits now and at any time in the future. For this defect SCS is to blame. This defect grows more

Frank Kotek, La Crosse County (1940s-60s)



Jan 16, 1946

U.S. DEPARTMENT OF AGRICULTURE RECEIVED JAN 18 1946

Mr. Schweers

I am taking a little time to let you know that I so often think of how I hesitated to join the Coon Creek Soil Erosion and how it by strip farming and soil conservation practices stopped gullying on my farm, greatly reduced soil losses and helped bring my farm back to a condition where I could again grow good crops I also could increase my livestock production 65% in a period of 5 yrs.

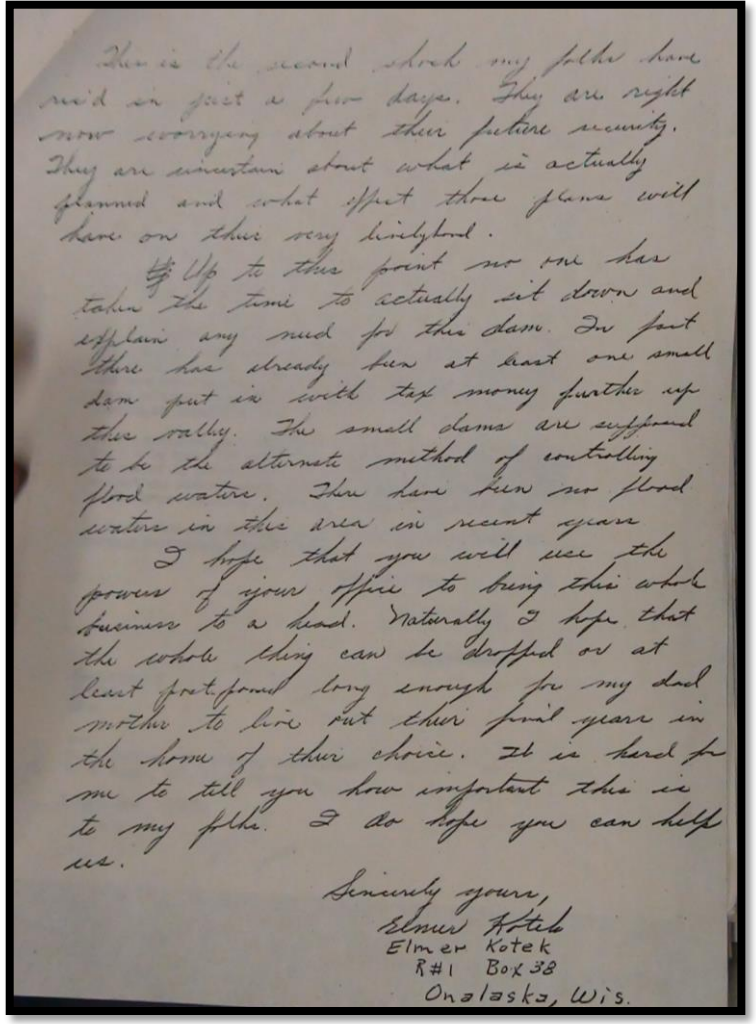
Am convinced that we can't farm as we used to. We must strip farm and stop gulling to hold our top soil

Strip farming and soil conservation is to our success.

Hoping this will find you in good health

I remain yours truly
Frank Kotek
Rockland Wis.

- Livestock production ↑ 65% in 5 years
- "Strip cropping and soil conservation is to our success."



Here is the second shock my folks have had in just a few days. They are right now worrying about their future security. They are uncertain about what is actually planned and what effect these plans will have on their very livelyhood.

Up to this point no one has taken the time to actually sit down and explain any mud for the dam. In fact there has already been at least one small dam put in with tax money further up the valley. The small dams are supposed to be the alternate method of controlling flood water. There have been no flood waters in this area in recent years

I hope that you will use the powers of your office to bring this whole business to a head. Naturally I hope that the whole thing can be dropped or at least postponed long enough for my dad mother to live out their final years in the home of their choice. It is hard for me to tell you how important this is to my folks. I do hope you can help us.

Sincerely yours,
Elmer Kotek
Elmer Kotek
R#1 Box 38
Onalaska, Wis.

- PL 566 project evict threatens "complete eviction" (now Meadow Brook Park/ Bohemian Valley Watershed & Sports Club)
- Parents want "to live out their final years in the home of their choice. It is hard for me to tell you how important this is to my folks."

LEFT:

FRANK KOTEK TO MARVIN SCHWEERS (JAN. 1946)

RIGHT:

(SON) ELMER KOTEK TO SEN. WM. PROXMIRE (AUG. 1963)

Let Paraquat be your plow.

So you've decided to give reduced tillage farming with Paraquat a try Then there's no longer any need to plow under unwanted weeds and grasses. Paraquat does that job. It knocks down competing vegetation fast, in a way that no residual herbicide can.

ORTHO Paraquat CL is a broad spectrum, fast-acting herbicide that burns back unwanted weeds and grasses in corn and soybeans. Mixed with a residual herbicide, it provides extended weed control without endangering your crop. Paraquat has been called the key to reduced tillage farming and reduced tillage means significant savings in time and labor. And, because reduced tillage farming with Paraquat controls erosion, you can often farm hilly land which you couldn't farm before.

Of great importance, too, ORTHO Paraquat CL is an environmentally sound product. It's inactivated on contact with the soil so there's little danger of lake or stream pollution from runoff.

If your program of weed control has been largely mechanical tilling, the use of Paraquat can save you a whole lot of labor, time and equipment usage. It can free you for countless other duties. Why not talk to your ORTHO Dealer about it? For best results, use Paraquat with ORTHO X-77® Spreader.

Chevron

ORTHO Chevron Chemical Company
PARAQUAT

TM'S: ORTHO, CHEVRON AND DESIGN – REG. U.S. PAT. OFF. AVOID ACCIDENTS: READ THE LABEL AND USE ONLY AS DIRECTED.
Circle 72 on Reader Service Card

SAVE MONEY, NOT SOIL...is the reason [redacted] gives for no-tilling.

The Vernon co., Wis., farmer says no-till pays off through lower production costs, higher quality alfalfa for his dairy herd and time and labor savings.

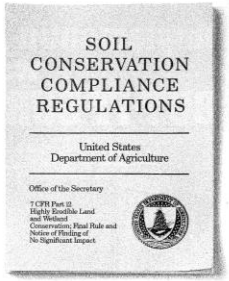
"I don't no-till just to save soil," he adds. "I do it because I can make more money."

Left: Ortho ad promoting Paraquat in conservation tillage operations (*No-Till Farmer*, 1972)

Top: Vernon County farmer praising no-till for its profitability (*No-Till Farmer*, June 1985)

Bottom: Dual herbicide ad linking cross-compliance, a product of the 1985 Farm Bill, to conservation tillage (*Agri Finance*, 1990)

The First Two Laws Of Soil Conservation.



You don't have to give up good weed control to comply with the new soil conservation law. Just use Dual® herbicide.

The law requires using acceptable conservation practices—like rotating corn, soybeans and forage, and keeping more trash on the surface—to reduce soil erosion.

Dual allows you to comply with this law, while still effectively controlling grasses. And because Dual is more soluble than other herbicides, you can apply it to trash at the same low rates you always use.

Once applied, Dual stays until the rain comes, without evaporating. And Dual needs only a half inch of rain to wash through the trash into the soil. After it's activated Dual remains near the surface, eliminating weed seedlings where they germinate. Dual also works on both corn and soybeans, so you have the flexibility to rotate crops.

Remember this law of soil conservation.

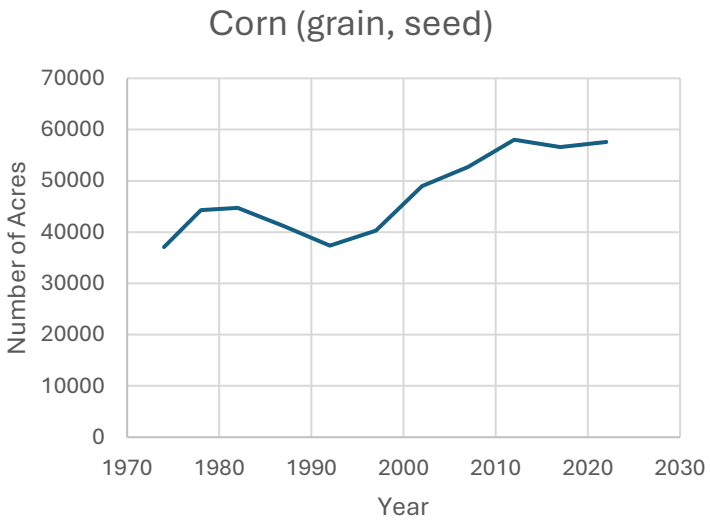
Nothing controls grasses better in conservation compliance situations than Dual herbicide.

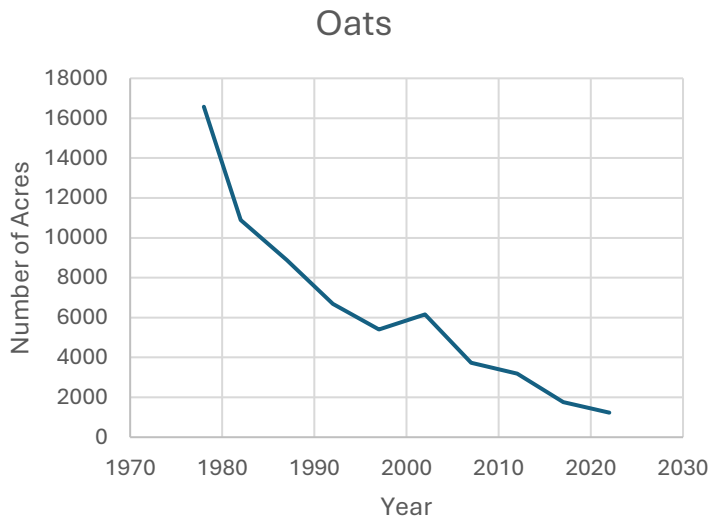
LONGER LASTING DUAL®
The Best Grass Control
Gives You The Best Cost Control.

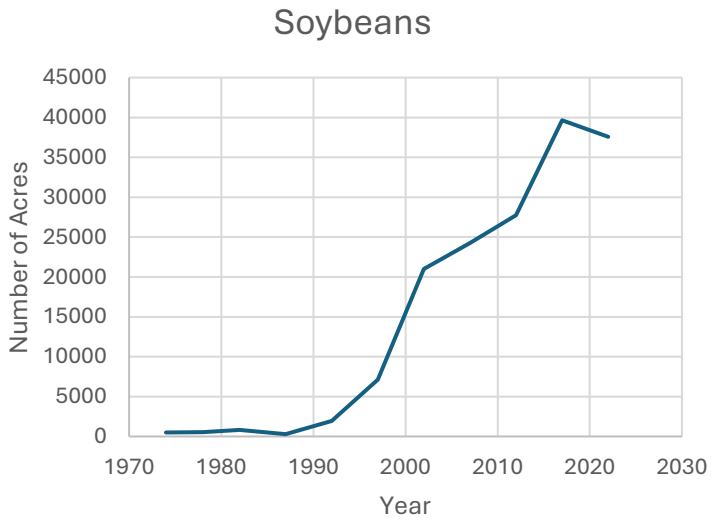
CIBA–GEIGY ©1988 Ciba-Geigy, Agricultural Division, P.O. Box 18300, Greensboro, NC 27419. Always read and follow label directions.

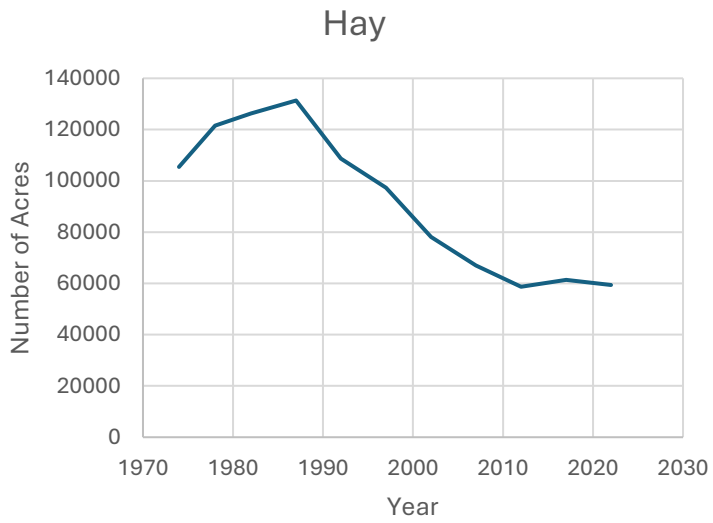
Crops Grown in Vernon County, Wisconsin (1974-2022)

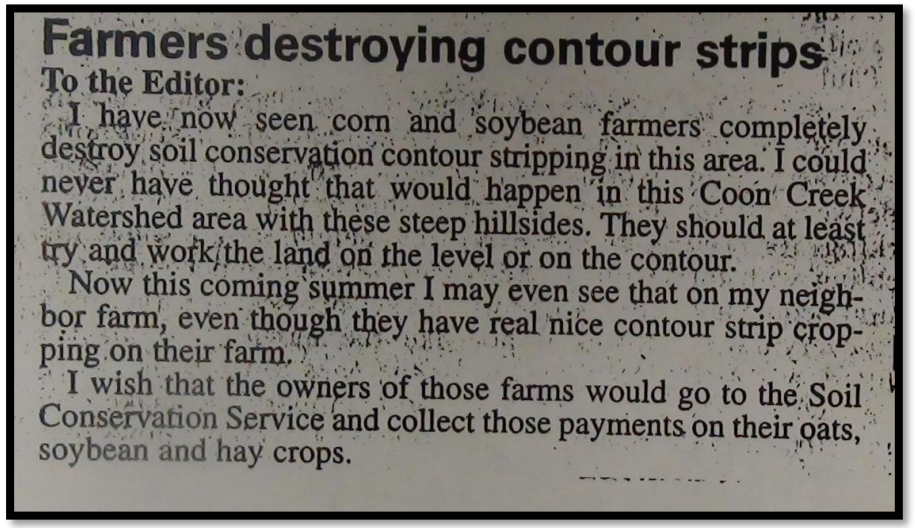
Source: *USDA Censuses of Agriculture*











Farmers destroying contour strips

To the Editor:

I have now seen corn and soybean farmers completely destroy soil conservation contour stripping in this area. I could never have thought that would happen in this Coon Creek Watershed area with these steep hillsides. They should at least try and work the land on the level or on the contour.

Now this coming summer I may even see that on my neighbor farm, even though they have real nice contour strip cropping on their farm.

I wish that the owners of those farms would go to the Soil Conservation Service and collect those payments on their oats, soybean and hay crops.

Soil conservation still needs to be practiced

To the editor:

It is now 70 years ago that soil conservation was started in this area. Farmers did not know how to control soil erosion that time before 1934. But now they know how, but some do not practice it because they have such big machinery.

On May 1, we planted corn on one contoured field strip after 10 years of hay. Last week we had 2 inches of rain. My neighbor had over 3 inches of rain. There was a lot of run-off water from fields above causing a lot of ditches, about 25 of them along a 200-foot-length of field.

Planting 24 rows of corn up and down the hillside was very bad. I wished that they planted straight ahead and turned around on our hay field. Road culverts are also very bad when there is no grassed waterway below. Grass area at the end of corn rows would help a lot. We are thinking about plowing one furrow.

Ernest Haugen
Coon Valley

Ernest Haugen letters to the editor protesting the abandonment of strip cropping: May 2003 (top); May 2004 (bottom)

Soil conservation policy: Local action and federal alternatives

Federal action is not requisite to controlling soil erosion at the conservation district level

By Richard Barrows and Carol Olson

SOIL conservation policy in the United States is in a process of ferment. Farmers, ranchers, researchers, government officials, and politicians are all groping for policies that will improve conservation behavior, and they are doing so in an era of shrinking budgets (5). Many long-established conservation programs are being questioned, the Agricultural Conservation Program among them (3). Further evidence of public concern about the need for new soil conservation policy is the evaluation of soil conservation policy alternatives by the U.S. Department of Agriculture under the Soil and Water Resources Conservation Act (5).

Several policy alternatives are being discussed. A "green ticket" program would enable farmers who follow good conservation practices to become eligible for more benefits under federal farm income support programs (2). Closely related is cross-compliance, which would require farmers to adopt erosion-control practices to participate in federal farm income support programs (1). Selected regulation of specific farming practices, when the payoff is great, has also been suggested (5). Other alternatives include increased cost-sharing funds for installing conservation measures, or requirements that if cost-sharing funds are used practices must be maintained for several years after installation (5, 6). Finally, many have suggested that existing programs could be redirected to have a greater conservation payoff (3, 5).

Most discussion of soil conservation policy focuses at the national level. The policy alternatives are framed in terms of federal action. There are good reasons for this. Historically, federal agencies have assumed leadership for soil conservation. This is because, as Larry Libby argues, the benefits of conservation accrue to future consumers, farmers, and taxpayers; they cannot be withheld from anyone. Most people agree with Libby's assessment that "soil conservation is a national concern, not a regional, state, or local concern" (5).

In November 1981, Secretary of Agriculture Block proposed a new cooperative federal-state-local soil conservation program (9). Some of the key elements of the proposal are: (1) federal matching block grants to states for adoption of soil conservation programs; (2) a reduction in funding for current federal programs; (3) various incentives and administrative changes to encourage state and local action, including support for state and local "pilot projects" to test new soil conservation policy ideas (9). Many observers have noted that major increases in federal soil conservation expenditures are extremely unlikely in the next few years (7). The Secretary's proposal reinforces this belief, and very directly raises the issue of the appropriate roles of state and local governments in soil conservation policy.

For at least the next few years, state and local governments will bear an increasing burden for developing new soil conservation policy initiatives. Conservationists need to examine carefully these state and local options. One such option worth examining is the soil and water conservation ordinance adopted by the Town of Sterling[1] in Vernon County, Wisconsin.

A progressive tradition

Vernon County is located along the Mississippi River in the unglaciated portion of southwestern Wisconsin. Narrow ridges and valleys with partially forested, moderate to steep slopes dot the landscape.

With nearly 90 percent of its land in farms, the county is one of the state's most agricultural. There is little industry other than agricultural processing. Dairying accounts for about two-thirds of all farm income, although livestock and small-scale tobacco production are also important.

Population density in the county is low. The largest city, Viroqua, has fewer than 5,000 residents. Average 1977 farmland value ($750 per acre), farm size (168 acres) and adjusted per capita income ($3,640) were all below the state average.

Vernon County has a long history of political conservatism coupled with an equally strong tradition of openness to innovative conservation programs. The first soil erosion control demonstration project in the nation, the Coon Creek Watershed Project, included about 66,000 acres of Vernon County land. Several Civilian Conservation Corps camps existed in the county in the 1930s, and the county was the first in Wisconsin to form a soil and water conservation district (SWCD) in 1939. By 1970, nearly 1,900 landowners had SWCD conservation plans. Public Law 566 watershed protection projects encompassed two-thirds of the county, and farmers were using contour stripcropping on 123,000 acres of cropland.

Row crops produce erosion

In the late 1960s, rising land values in the Corn Belt and low land values in Vernon County attracted out-of-state cash-grain farmers to the area. Many local farmers say that some newcomers tried to duplicate their Corn Belt operations on land ill-suited for row crops. In defense, some farmers argue that high land prices (and corn prices) dictated that as much acreage as possible be planted to corn. But other farmers counter with the view that corn production produces soil erosion. They also dispute the notion that each

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[1]In Wisconsin, a Town is a local unit of government encompassing unincorporated (rural) land. Often, but not always, a civil town is coterminous with a survey township (6 miles square).

Top: Story about Vernon County conservation district enacting regulations in 1977 to control agricultural water pollution in Sterling, WI (*Journal of Soil and Water Conservation*, 1981)

Right: Rachel Lovell, "The Farms Being Run from Space," *BBC* (March 11, 2021)

Lessons for Today:

1. Is voluntarism alone up to the task?
2. The missing link in "climate-smart" ag: social sustainability
3. Not all forms of conservation & sustainability are equal

Regulations & Land Use

"We asked the farmer to do what he conveniently could to save his soil, and he has done just that, and only that. The farmer who clears the woods off a 75 per cent slope, turns his cows into the clearing, and dumps its rainfall, rocks, and soil into the community creek, is still (if otherwise decent) a respected member of the society....

"The [Soil Conservation] District is a beautiful piece of social machinery, but it is coughing along on two cylinders because we have been too timid, and too anxious for quick success, to tell the farmer the true magnitude of his obligations."

- Aldo Leopold, "The Land Ethic,"
A Sand County Almanac (1949)