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THE LAND AND HOW WE USE IT

Aldo Leopold wrote in the "Sand County Almanac," "The first ethics dealt with the relation between individuals, the . . . second with the relation between the individual and society. There is as yet no ethic dealing with man's relation to land and to the animals and plants which grow upon it. The extension of ethics to this third element in human environment is . . . an evolutionary possibility and an ecological necessity."

The land ethic--this was Aldo Leopold's philosophy, his belief, and his crusade. He wrote about the land and living things with acute perception, depth of understanding, breadth of knowledge, sensitivity, and gentle humor.

His genius emerged at the time it was desperately needed--when the land, which had once seemed inexhaustible, was found to be drying up, blowing away, or running down gullies into rivers and the sea.

This country is fortunate in having had a visionary like Aldo Leopold. Another prophet who saw the same problems in the land and who preached and practiced conservation was his contemporary, Hugh Hammond Bennett, who in 1935 became the first Chief of the Soil Conservation Service. Bennett believed that conservation of land and control of erosion should be a team effort, so he staffed the new agency with a variety of technical people--agronomists, engineers, soil scientists, biologists, foresters, economists, nurserymen, and hydrologists--scientists who coordinated their ideas and efforts and who became part of a new breed--the soil conservationist.

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This was in the mid-1930's. Soon the SCS was busy with demonstration projects, CCC camps, plant and seed nurseries, and experiment stations. Within three years tens of thousands of landowners had become conservation farmers or ranchers. In time, SCS responsibilities were broadened. There were flood control surveys, water facilities, land utilization programs, irrigation and drainage projects, snow surveys in the West, and flood control operations on farmland. Some of these responsibilities eventually were shifted to other agencies in the Department of Agriculture, but SCS had shaped or contributed to each one.

Hugh Bennett said in 1933, "Soil conservation is essential whether we are ready to admit it or not. The ravages of unrestrained farming have left us in a situation where we have no more land to waste."

That same year Aldo Leopold wrote, "The conservation movement is, at the very least, an assertion that interactions between man and land are too important to be left to chance, even that sacred variety of chance known as economic law. We have three possible controls: legislation, self-interest, and ethics."

Both of these men were convinced that the interactions between man and land are too important to be left to chance.

We're all aware that the amount of agricultural land is diminishing while population and food needs are increasing. A recent report by the Presidential Commission on World Hunger states that unless the United States and other developed countries act now to increase long-range agricultural productivity, a global food crisis--much worse than the present energy situation--is likely within the next 20 years. Two successive years of bad harvests in any of the major grain-producing nations could cause widespread famine and disorder in poor countries.

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This would severely disrupt a fragile world economy already weakened by energy shortages and rampant inflation. The U.N. and the World Bank have given similar warnings.

Secretary of Agriculture Bob Bergland said recently, "I don't know where it is going to stop. But stop it must. Continued destruction of cropland is wanton squandering of an irreplaceable resource that invites future tragedy not only nationally, but on a global scale." Then he pointed out that U.S. population growth may require 50,000 new housing units a week from now until the year 2000, removing additional lands for roads, power plants, and job-related industry. He calls these two opposing trends a "collision course with disaster."

We are losing good farmland daily. Each year some 3 million acres of rural land are taken out of agricultural use--for good. Yet there are barely 127 million acres of land in the United States with high or medium potential for conversion to cropland. Only 22 million of these acres have the potential to be prime farmland, the land best suited for growing crops.

Where will we get sufficient land to meet America's and others' future needs? We'll have to arrange tradeoffs, because those 127 million acres of potential cropland are now in other uses. About 92 million acres are grazing land and 32 million acres are forest land. To convert this land to crops would mean a loss of valuable forage, wood, and wildlife habitat.

I don't want to stun you with statistics, or numb you with numbers. But I do want to add these facts: right here in the Corn Belt states there is an annual soil loss on cropland of almost 10 tons per acre per year. We all know that some soil loss is inevitable.

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But this figure of 9.9 tons per acre is twice the amount that can be tolerated if we are to keep the land rich and productive.

In the hundred years that Iowa's land has been farmed, 6 to 8 inches of topsoil have been lost from our unprotected cropland. This is half of the amount originally on the land. If this loss continues at an average rate of 13 tons per acre per year, the next hundred years will see the remaining topsoil gone. And gone for good, as far as we're concerned. It takes a long, long time to build an inch of topsoil.

If these conditions are allowed to continue at the present rate, in another 40 years one-quarter of this Iowa land that is now slightly eroded will be severely eroded. We can expect this erosion to push crop yields downward.

What is being done about these conditions?

I think the Iowa districts and farmers and State Soil Conservation Committee and the Soil Conservation Service are doing a good bit about them. In fact, Iowa is ahead of all other states in the development of soil and water conservation plans. We haven't solved all the problems, but we're working on them together.

Together. That's the important word. I'll digress a moment to tell you about a most rewarding experience in working together. I had the pleasure of serving for six years on the Pollution from Land Use Activities Reference Group set up by the International Joint Commission of Canada and the United States to study pollution in the Great Lakes system. One of the biggest problems there was one you share--nonpoint pollution.

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Though the Great Lakes aren't yet the clean and shining waters we want them to be, the knowledge gained through scientific studies and through the joint efforts of public participants as well as specialists in both countries makes me feel confident that the goal will be reached.

And that knowledge will be helpful to you here in Iowa, and to all the farmland states subject to nonpoint pollution. It's this kind of cooperation, practiced on the state and district level, that has brought about many of the successes you've experienced here.

Iowa has a great deal to be proud of. Year after year, this particular corner of the state is first or second in Statewide agricultural production.

The use of sediment control basins originated in southeastern Iowa. You're taking the lead in conservation tillage farming and proving that such methods are not only effective in preventing soil loss, but economical as well.

There's still too much soil being lost here. But the tile outlet and parallel terrace program is another important step in helping to control the water and to prevent sheet erosion.

In the mid-70's, when thousands of Iowans were asked what they thought was their state's most important natural resource, almost all replied that it is the land. And keeping the land productive is their first priority.

Two years ago Iowa's 100 soil conservation districts asked more than 8,000 people to help to list those resource problems which troubled them most. In every district, soil erosion was cited as the greatest problem. I won't quote more statistics on the amount of soil lost to erosion.

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But I will congratulate you on your awareness and concern, and on Iowa's creation of Iowa Soil 2000--your legislative efforts to control soil erosion by the year 2000. This plan is forward-looking in its grasp of needs and in its bold objectives for each 5-year interval in the next 20 years.

I'm also interested in what farmers in seven Iowa counties are doing in what's called the Iowa Till Program. This is an innovation and something to be proud of. In this program, the State legislature provides \$500,000 for the State Soil Conservation Committee to spend on a demonstration program in Benton, Cedar, Clinton, Jackson, Plymouth, Story, and Winneshiek Counties. Landowners and farm operators in the program receive \$30 an acre ~~when they agree to leave at least 50 percent of their soil covered with~~ specified amounts of the previous crop's residue for a period of five years. This is called conservation tillage, and it is the fastest growing conservation practice in America. We'll hear a report on the program's effectiveness from the general assembly next year.

In the meantime, there's an intensely interesting project going on nearby at the Army Ammunition plant. Your local Soil Conservation District, along with Iowa State University Community College, the Department of the Army, the SCS state office, and Extension people have worked together on it.

Five hundred acres of land are being used for research and for demonstration of the comparison between conventional tillage, reduced tillage, and no-till. In other words, in the no-till section the residue is left on the ground after harvest, showing clearly that this method drastically reduces soil erosion. Water penetrates to the topsoil, but cannot wash it away. I hope you have seen this project.

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Up in Black Hawk County, where 90 percent of the land is devoted to corn, soybeans, and other grains, and where the county seat of Waterloo is understandably centered on agriculture, the citizens became very concerned about urban sprawl. They realized that they must somehow save their prime agricultural land from encroachment by subdivisions, three-acre estates, and strip development along the highways. Their solution was to develop a zoning ordinance. Using our soil survey for the county, the SCS district conservationist, the County Zoning Commission, Regional Council of Governments, and concerned citizens were able to determine which areas were prime farmland. With this information, they developed a new zoning policy which guides development to non-prime areas. This is a fine demonstration of Aldo Leopold's conservation ethic--the harmonious relation between individuals, society, and the land.

Now I want to tell you a little about what's going on nationwide with regard to these same problems.

First, land use. As far back as 1931 the Department of Agriculture convened the first National Conference of Land Utilization. Since then there have been periodic conferences and writings on the subject. Several years ago I served on a panel called Land Use--Persuasion or Regulation, and was charged with presenting the point of view that both of these positions are workable. I believe, and continue to preach, whenever possible, that laws and government programs can blend private rights and responsibilities with public needs.

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In October of 1978, the Secretary of Agriculture signed a memorandum clarifying the Department's role in encouraging the retention of important agricultural lands and working with local and state government and other federal agencies to establish procedures for environmental and administrative review. The memo states that the Department recognizes the rights and responsibilities of state and local governments for developing public policies and for planning and regulating private land use. Another example of government and the public working together.

Right now, as an extension of this memo, one of the most far-reaching and comprehensive studies on land use is being carried out through the National Agricultural Lands Study. It is chaired jointly by the U.S. Department of Agriculture and the Council on Environmental Quality. Its main concern is the retention of farmland for agriculture. How much land is available? How much of this land is being converted to other uses, and why? How can it be kept for agriculture? How does the retention or loss of this land affect the United States and the rest of the world now and in the future?

There's been a good bit of publicity on this study. Just last month the Des Moines Register ran a story by George Anthan, their Washington correspondent, in which he quoted some alarming statistics. Using figures from the period 1967 to 1977, and projecting these figures to the year 2000, the study predicts that if there is no change in our policies and practices, Florida, New Hampshire, and Rhode Island will lose nearly all of their prime land.

The cornbelt states may lose as much as 3.2 million acres of prime farmland. This is only 4 percent, but it's equivalent to the loss of 480 million bushels of corn each year, and a projected dollar loss of 1.2 billion. A staggering thought. If Iowa's population continues to increase slowly, this state will lose only 2 percent of its prime farmland--but this represents 345 thousand acres of your rich soil and more than a million bushels of corn a year.

What can be done?

The study shows that already 48 states and many local governments have adopted programs of one kind or another aimed at retaining agricultural land. The Black Hawk County program is certainly one of the good ones. Many states have property tax laws giving preferential treatment to farming. In some places landowners are compensated if they give up their rights to the development of their land. And so on. The study is making a thorough assessment of the existing state and local programs, plus an evaluation of federal government projects affecting land use. We expect these efforts to fall in line with the President's strict policies on inflation and budget balancing.

Directors of the study know that public involvement is most important in helping to shape policies for the preservation of this precious land. Very sensibly, they went to the public through a series of regional workshops where groups of people with diverse backgrounds spent one and a half days expressing their concerns and discussing the most important ones in depth. At the workshop in Dubuque last November the problem with the highest priority was the conversion of farmland to non-farm uses.

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Next was the erosion of soil productivity. Support was strong for measures to limit both of these problems.

On the same theme but broader in scope is the second important thing I want to mention. This is the Soil and Water Resources Conservation Act of 1977, or RCA for short. This law directed the Secretary of Agriculture to appraise on a continuing basis the soil, water, and related resources of the Nation's nonfederal lands; to develop a program to further the conservation, protection, and enhancement of these resources; to report to Congress and the public in 1980; and to repeat the process in 1985.

The 1980 RCA process has proved a tremendous undertaking, and as our work continues, we are increasingly aware of its vital importance. What we do now will help determine the future of the Nation's natural resource base into the year 2030--50 years from now. That's either a whisper in time where the land is concerned, or a two-generation span in which we may face drastic and world-wide deprivations.

While we were conducting our RCA appraisals, we had the benefit last fall of input from a scientific sample of 7,000 of your fellow U.S. citizens in a poll conducted by Louis Harris and Associates. A cross-section of the entire adult population was queried on a number of major conservation and agricultural issues. I think you'll be gratified to learn that farmers are not alone in their recognition that the conservation of soil and water is one of the country's most pressing concerns.

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More than half of all Americans consider the loss of good farmland a very serious problem, and the poll questioned people in cities, towns, and suburbs, as well as those on farms. Americans see conservation as a joint public and private responsibility and feel the burden should be shared fairly between government and the farmer.

By 7 to 1, Americans accept federal action to protect farmland from erosion as a proper role for government. There is a consistent preference for allocating a greater share of soil and water resources to agriculture--specifically to food production--rather than to competing housing, industrial, energy, or recreation uses.

All of this information helped to reinforce our findings. We've published two thick RCA volumes containing facts we've learned about the Nation's land and water, and we have a draft program for the future. The documents also set forth seven alternative proposals for organizing and delivering conservation programs. They suggest a variety of approaches to financing and managing the programs, with special consideration of the roles of the individual landowners, the federal government, the states, and others.

The RCA draft documents were made available to the public and we invited comment through a series of regional meetings and through a response analysis center in Athens, Georgia. We're busy now summarizing more than 67,000 comments. After that they'll be evaluated and incorporated into a future RCA document.

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We're very grateful for the tremendous response we've had from the American public, and for the knowledge that so many are aware and concerned about conservation issues.

What happens now?

Now we're going back to the drawing board for one comprehensive and significant program. Late in the summer we'll come back to the people again to get the public's thoughts before the program goes to the President.

You'll hear the details of the recommendation when it's completed, because these soil and water conservation programs are part of your daily lives here in Burlington. And during the past month of honoring Aldo Leopold you've increased your awareness of the ever-present need for conservation ethic. As Aldo Leopold said, "Conservation is a state of harmony between men and land." Today we'd say between people and the land, but we'd be talking about the same principle. The truth is that we must either learn to live in harmony with our resources on this shrinking planet . . . or we must perish. There is no third course. Conservation is our only hope for the future.