

Influence of Social Trends on Agricultural Natural Resources

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You have already heard about attitudes, surveys, vertical patterns in agriculture and mega-trends. The next two days promise to be equally informative. My prepared text is for the record. At this time of the day you deserve a comedian.

From the higher hills of age and experience, hopefully what is said may stimulate thinking about agricultural natural resources and past and future influence of social trends. However, I confess that while preparing this talk, several options offered by your theme were not fully explored nor adequately developed leading to a degree of frustration. What is a social trend? What motivates people? What is the role of society when those owning and operating land are asked to practice stewardship, have a land ethic? In the Winter, 1995 American Journal of Alternative Agriculture Professor Molly Anderson said, "Alternative agriculture is the confluence of a research area and social movement. --- Agriculture, like all resource management, is an interaction of people both with people and with the environment, not just the latter". She quoted D. Ludwig who argued that, "resource problems are not really environmental problems. They are human problems that we have created at many times and in many places, under a variety of political, social, and economic conditions". I'll refer to this later when citing

an exchange of views I had in 1986 with Professor Donald Worster in regard to an alteration of our cultural values.

The late, and in my opinion, great Adlai E. Stevenson, said, "The knowledge one has acquired with age is not knowledge of formulas, or forms of words, but of people, places, actions a knowledge not gained by words, but by touch, sight, sound, victories, failures, sleeplessness, devotion, love—the human experience and emotions of this earth and of one's self and others. Perhaps, too a little faith, a little reverence for things you cannot see". A reminder: he was a Democrat.

Fact one: I accepted the invitation when asked for my views because previous RCA efforts did affect farm legislation. Also, I'm involved in studying issues for the current farm bill. A more daunting request is to think about some future trends of our natural resources at two separate junctures—10 and 50 years in the future. It's an honor to participate in this RCA Symposium, and to engage in a dialogue tonight.

What's Old ?

The first RCA bill was vetoed. Later, Public Law 95-192, the Soil and Water Conservation Act of 1977 (RCA), was enacted because the U.S. Congress was concerned about the condition of the Nation's basic nonfederal natural resources. Congress over four decades earlier established the Soil Conservation Service in the U.S. Department of Agriculture, after the Soil

Erosion Service had been created in the U.S. Department of the Interior in 1933, by an Executive Order. Thus the Nation, by law, has recognized the importance of conserving soil, water, and related resources on our non-federal lands, mostly privately owned and operated, for over sixty years. RCA had asked the Secretary of Agriculture three basic questions:

- What are the resource problems ?
- How do you propose to solve these problems ?
- What are the expected results of your solutions ?

The U.S. had, because of a rapid increase of agricultural exports, and fence-row-to-fence-row planting encouraged by the U.S. Department of Agriculture (USDA), "busted sod". Many marginal soils were being used as cropland, including large acreages previously in the Soil Bank, increasing soil loss. The Department, in response to the Act, has done Appraisals, submitted to Congress National Conservation Programs, and the 1988-97 NCP Update. I'll relate the impact of that work on prior Farm Bills later. Future RCA efforts, i.e. Appraisal III and another National Conservation Program, will relate to 2000 and beyond. Also, P.L. 99-198 and P.L. 103-354 amended The Soil and Water Resources Conservation Act of 1977. The continued recognition of the Act by Congress is good news.

Fact two: If you will indulge one, who as a U.S. Marine, was close to events of 50 years ago now in the news, i.e. FDR's death, use of the Atomic Bomb to end World War II, and the

beginning of President Harry's Trumans terms, post-WWII, I'll try relating history to the theme: Influence of Social Trends on Agricultural Natural Resources. Our lives evolve through three time-zones: past, present, and an unknown future. My life, except for the duty demanded during WWII, has been associated with agriculture. My family had a small farm in the 1920's. We were only one of over six million. Rubber tires for tractors and other agricultural machinery was introduced permitting greater speed between farmstead and fields, and extending the life of the equipment. Hi-Bred corn was developed and sold by the Henry Wallace people in Iowa. We farmed north of the Twin Cities, but were able to obtain Canary Grass seed from Iowa State University. A major socio-economic event, the Great Depression, led in 1933 to a national government, dedicated to solving problems. The "New Deal" led to Rural Electrification, the Tennessee Valley Authority, the Agricultural Adjustment Act, Farm Security, Social Security, and the Soil Conservation Service (SCS). Hugh Hammond Bennett's crusade proved timely.

In 1934 those wind-borne soils from the Dakota's darkened our sky. The newly created SES made a reconnaissance survey. It was done on 1.9 billion acres, representing the total area of the Nation, exclusive of urban and water territory. That survey indicated that on nearly 600 million acres, in nearly all parts of our country, there was little or no erosion of any kind. However, on over 850 million acres, that survey found sheet erosion was generally prevalent in degrees ranging from slight damage to complete destruction. Wind erosion had also

affected nearly 323 million acres, principally in the middle western states. This aggregate included 80 million acres seriously damaged or practically ruined for productive use. Gully erosion caused severe damage on about 337 million acres. This data, coupled with the Great Depression and "Dust Bowl" conditions, led the U.S. Congress to create in U.S.D.A. the Soil Conservation Service on April 27, 1935, after the SES had been moved from the Department of the Interior to USDA.

Fact Three:

As I said at the USDA Agricultural Outlook Forum, Agriculture, since its beginning many centuries ago, by its very nature, has changed our Earth's natural environment. This will continue. Socio-economic conditions, spanning over four centuries, have caused several actions impacting the "original" or "primeval", and natural resource condition of the Nation's landscape:

1. The clearing of forested land, and the
2. The plowing of grass land for planting of crops,
3. The draining of wet lands for agricultural use,
4. The irrigation of dry lands,
5. The grazing of rangelands by livestock,
6. Strip-mining for minerals,
7. Growth of metropolitan areas, and associated highways, airports, and other facilities and conversion of prime soils,
8. Daming of streams and rivers, and the accelerated
9. Pollution of waters by sediment from soil erosion.

While the natural resources were being modified by humans, there were changes in the populations of existing animals:

- 1.Reduction, and in some cases extermination, of animals considered dangerous to the human species (bears, lions),
- 2.Reduction in numbers of certain big-game animals (buffalo)
- 3.Extermination and/or reduction of certain rare or endangered species,
- 4.Increases in populations of certain birds and mammals, and
- 5.Changes in invertebrate populations have been from slight to cataclysmic, but most need more study to know what has happened to a wide variety of creatures. i.e. earthworms.

There has also been the introduction of plants and animals from other parts of the world, including:

- 1.Common weeds, (ragweed, morning glory, dandelions),
- 2.Insects, (Japanese beetle, cotton boll weevil),
- 3.Virus, bacterial, and fungus diseases, (Dutch Elm),
- 4.Trees and shrubs, (Kudzu, Scotch broom),
- 5.Game and song birds, (English sparrow, pheasant, starling),
- 6.Game animals, (European boar), and
- 7.Other animals, (nutria, mongoose, rats).

The socio-economic events impacting natural resources were also causing major actions and laws that included :

- 1.The Declaration of Independence,1776,
- 2.The Emancipation Proclamation,1863,
- 3.The Nineteenth Amendment,1920,
- 4.The Indian Citizenship Act,1924,
- 5.The Soil Conservation Act,1935,
- 6.The Fair Labor Standards Act,1938,
- 7.The Civil Rights Act,1957,
- 8.The National Environmental Policy Act,1970,
- 9.The Endangered Species Act,1973,and
- 10.The Food Security Act of 1985.

The social trends following WWII,supported large families, the move to the suburbs,every family with a green lawn,the Interstate Highway System,and "no limit on growth"thinking. During my tenure in SCS,Congress added several authorities: the Watershed Protection and Flood Prevention Program,the Great Plains Conservation Program,the Resource Conservation and Development Program,the NRI,and the RCA.Also,SCS was assigned a role in the Agricultural Conservation Program, leadership for the Cooperative Soil Survey,the River Basin activities,establishment of over twenty Plant Material Centers,and encouraged the creation and governing of 3,000 Conservation Districts.Because of early RCA efforts a 1981 Farm Bill emphasized targeting,and the legal use of many volunteers.Because of continued confidence,and trust in the agency's ability to deliver,the Conservation Titles of the 1985 and 1990 Farm Bills,and P.L.103-354(USDA Reorganization Act of 1994)all generated additional duties for the SCS re-

named the Natural Resources Conservation Service (NRCS).

Fact Four:

The 1997 National Resources Inventory (NRI) played a key role in Appraisal I and the first NCP. That survey revealed that a very large share of the Nation's soil erosion occurred on a relatively small portion of U.S. land. This observation was found to be true of the major types of erosion—wind, sheet, and rill—and applied to all land uses (crop, range, pasture, and forest lands). In 1977, about 38 million acres of non-irrigated cropland—11 percent of the total—eroding in excess of 15 tons per acre annually accounted for 1.328 billion tons of soil erosion, or about 53 percent of the total wind, sheet, and rill erosion on nonirrigated cropland. In 1977, 25 million acres, just 6 percent of total cropland, accounted for 43 percent of the total tonnage of cropland sheet and rill erosion (828 million tons per year). I cite this data because by the early 1980's, after the 1981 Farm Bill, the Nation became aware of need for the significant action taken in the 1985 Farm Bill.

Armed with appraisal data, analysis of resource conditions, the results of evaluating existing programs, and the opinions from public participation work, the first national plan suggested several options. Programs should move away from the "cafeteria" or "first come, first served" approach of traditional programs. The preferred program established clear national priorities. The highest was reduction of soil erosion to maintain the

long-term productivity of agricultural land. Reduction of upstream flood damage, water conservation and quality, fish and wildlife habitat improvement, and community related conservation problems were also high priorities. One option was the requirement that land owners have a conservation plan to be eligible for Farmers Home Administration loans (a forecast of the need for even broader conservation compliance). That first NCP would strengthen partnerships, provide block grants, add to the voluntary-incentive-driven approach, and minimize conflict among USDA programs. Areas were recommended for targeting of limited technical and financial resources with mixed results.

The social trends that began with the environmental movement, as celebrated by a quarter century since "Earth Day", played a key role in the 1985 Farm Bill. A surplus of crops, concerned citizens about wetlands, and breaking out of good grass and tree land for cropland, all were background noise for change. The Conservation Title in 1985 changed the USDA, and primarily one agency's agenda, priorities, and method of working with the owners and operators of cropland. I left the Soil Conservation Service in early April, 1982. My concern about conservation did not diminish. Work as a consultant to non-profit conservation organizations, and lessons learned from long-term RCA activity has had an impact on prior farm bills, and may influence some of the current farm bill decisions. The importance of having conservation coalitions agreeing on principles to be stressed during the formulation of policies was apparent to many.

Is the past still prologue? Some now say the future will be so different as to make the past irrelevant.? Who is right ? If social trends during the past sixty years influenced the history of conservation in USDA, will those trends continue ? If social trends have influence, how and, in what way(s) ?

Fact Five:

In 1986, a nationally acclaimed historian then at Brandeis University, explored the root causes of America's inability to overcome soil erosion problems. He focused his critique on the SCS, but his criticism of ineffective federal programs and poor farm practices extended beyond one agency to the nation's cultural and economic values. He argued that the SCS, created in response to the economic and resource crisis of the Great Depression, soon became entrapped by the value system that was responsible for soil erosion problems in the first place. As a result, SCS officials began to offer technological solutions to political and cultural problems. He asked "if these programs have been around for so long, why do the problems still persist?" Is it not time, he wrote in 1986, to search for alternative solutions ? I was asked to respond. His article was entitled: *A Sense of Soil, Agricultural Conservation and American Culture*. Mine was: *Playing by the Rules*. First, I argued that the SCS had done a remarkable job, and pointed with pride to the agency's environmental record. Then I contended that the public institutions, if they are to be effective, must work within the political boundaries set by

a society's enduring principles, and in this case those principles are the individual pursuit of wealth, and the sanctity of private property. I discussed the 1985 FSA with the land use incentive (CRP) and disincentives of that new law. He had the last word. "I am pleased to have the comments of a thoughtful, loyal, public servant. Of course, the SCS has done some good and, of course, it is not the major source of our land problems. My point is that it has not provided much of a solution either. The reason for the lack of progress is cultural: we continue to put individual wealth and immediate satisfaction—whether farmers or urban consumers—ahead of the health of the land or the well being of future generations. Obviously, Mr. Berg does not quite believe what he implies". That dialogue in full is in Volume One, Number One, Spring 1986 of TVA's publication: *Forum for Applied Research and Public Policy*.

The question all of us have to ponder is which of these social goals—personal wealth or social sustainability—is more important? Is it more realistic to accept the widely held assumption that in the U.S.A. both have high priority? The President's Council on Sustainability Development may address this issue when they make their studies known.

At my age hindsight seems to be more relevant than foresight. In a November–December, 1968 issue of the *Journal of Soil and Water Conservation* I wrote of the requirements of the Soil Conservationist of tomorrow. He or she will continue

to need training in agriculture and in soil, plant and animal sciences. In addition, however I suggested the need for:

- A greater knowledge of economics related to resource work,
- Undergraduate courses in the social and political sciences that relate to the use of renewable natural resources,
- Training that places more emphasis on the ecological aspects and consequences of manipulating the natural environment,
- An appreciation of aesthetic and intangible values, as well as knowledge of how to make sound benefit-cost evaluations,
- Skills in the art and science of working with people to assist local leadership and obtain maximum participation,
- A better understanding of the planning process, and
- Above all the skills needed in the "Management of Change".

I went on to say, "The soil conservationist of tomorrow must fully understand the extent and character of all resource activities, both governmental and non-governmental. He or she must be able to articulate fairly sophisticated recommendations for action in the public arena for conservation policies and programs. For this one's education, training, and experience must above all equip one fully as a leader in conservation thought and action in a highly competitive world". Most of those recommendations are still valid. However, I did not foresee the great influence of the computer and the skills needed for use of that technology.

What's New ?

Has the agricultural conservation movement, after sixty years of legal and financial support, finally come of age? If the consensus is yes does age make adaption to change difficult?

Question, are conservation agencies, who are increasingly preoccupied with internal, intraagency and program administration issues, been listening and observing what is on the agenda of their clients? Will the need for a national soil conservation program, funded with federal funds and staffed with federal civil servants to serve private land owners and users, continue to be supported? Why a national presence? Why isn't this primarily a State and/or local problem? As the nation seeks deficit reduction, and further downsizing of the federal government, what responsible action will be required from the private sector on all issues? I have heard that the present Speaker of the House has directed the majority members of the House to ask eight questions of every federally funded activity. If answers are negative (and I haven't seen the questions) the program is in trouble. In the natural resource conservation field the future will include several critical resource and environmental issues that are already well known. These are threats to the resource base through accelerated soil loss, degradation of soil and water quality, loss of biological diversity, potential contamination of our food supply and both surface and groundwater by chemicals, and the conversion of prime and unique agricultural land to nonagricultural uses. Most of the above have also been problems in the past.

What social trends will influence favorable decisions ?

Emerging from a productive, if turbulent, half-century of change, America's agriculture now faces a future that appears to increasingly link agricultural sustainability with the quality of the environment. The quality of soils, the quality of waters, the quality of habitat for wildlife, link science and policy as documented in the Soil and Water Conservation Society's three forums on the *State of the Science* on these concerns. The potential blueprint for the 1995 Farm Bill may find the dozen principles developed by SWCS useful along with the "Regional Listening Forums" conducted for USDA in mid-1994. The recent SWCS Farm Bill Conference endorsed the move beyond the focus on only highly erodible croplands into a holistic public policy. Resource protection, and programs to increase yields and strengthen America's competitive position in the world markets, are interrelated issues for legislation and for implementation. The next farm bill, with any new conservation provisions, will need to be more market-oriented. Although the current review of regulations impacting all industries is underway, recent polls say the public will not tolerate the irresponsible use of land and other natural resources. Land-owners and users, most of whom are good stewards, deserve the freedom to plan and manage their land. However, they must also consider how their use of their land impacts their neighbor, and their community. Compensation for perceived loss of value if land is identified as having benefits to society will, in my opinion, continue to be a contentious matter. The majority

of land owners do support conservation compliance and will support common sense sanctions for those few in violation.

Legislation in the future should search for the constraints that decrease environmental quality. Agriculture, if encouraged by society, will produce and maintain not only food and fiber, but non-marketable products, i.e. open space, wildlife habitat, watershed protection, and the beauty of a conservation landscape. Compensation, defined in several "green payment" scenarios has promise of Congressional support, if funding can be found. There will be pressure to have a better reason for public support of "farm policy". Rewarding stewardship by land users would appear to be more rational than that used in the past.

What's Cool ?

The RCA III Working Papers and Issue Briefs scheduled for publication in 1995, including Sociological, among the over thirty documents should provide details needed for any realistic assessment of both a short and long-term future. The studies that I have been part of this past year include:

- The Keystone Dialogue on Agricultural Management Systems and the Environment,
- The National Center for Food and Agricultural Policy and the Humphrey Institute of Public Policy (Six Farm Bill Working Groups including Land Use and the Environment and Price and Income Stability),

- The World Resources Institute's report, *Growing Green*, and
- The Agricultural Policy Reform Proposals for the 1995 Farm Bill of the American Farmland Trust.

In addition I served on the Program Committees for National Programs on the Future of the Conservation Reserve Program, the State of the Science Forums, and the Agriculture and the Environment: Issues and Options for the 1995 Farm Bill meeting. This past year I've participated in Workshops on Ecosystem Management by the Congressional Research Service and another by the National Academy of Science. I have testified before legislative and appropriation Committees, and am monitoring the conservation related activities of the 104th Congress.

Is it time for a quite revolution of the Nations farm policy? Soil and water conservation has received substantial support including research, education, technical and financial, for six decades. However, severe problems remain. Sandra S. Batie, the Elton R. Smith Professor of Food and Agricultural Policy at Michigan State University gave an excellent paper at the 49th Annual NACD Meeting. She said, "The period 1930 to 1970 was a time when agriculture was seen as a solution for America's problems. Post-1970's began seeing agriculture as the problem. Now, we have moved from the age of conservation to environmentalism, away from conflict toward compromise, from Federal predominance and funding to state/local predominance with less funding. We are moving from mechanical technologies toward information-based technologies".

A Moment on the Earth, The Coming Age of Environmental Optimism, by Gregg Easterbrook says the environmental news is getting better, not worse. His book is being compared to Rachel Carson's *Silent Spring* (1962), not for its revelations, certainly not for its grace, but for its potential influence on public discourse.

Some in the 104th Congress see REGULATION as what the Devil has printed on his "T" shirt. Former Wisconsin Governor and U.S. Senator Gaylord Nelson, the person who founded Earth Day, says, "There are good environmentalists who see too much red tape and too many mandates, and they think it can be improved and they're right. The environmentalists have failed on this. They haven't fought to ensure environmental laws were effective without being excessive. They haven't done a damn thing about that". The present politics of devolution and deregulation involves ideas and rhetoric that will not, I'm convinced, stand the test of public scrutiny. But changes will be tried.

Finally, I return to personal views, tempered by age and long experience, about the short and long term future for those engaged in natural resource conservation and protection. We heard from your clients at the July-August, 1994 "Listening Forums" words, that in many ways, was a forecast of the last election. The trends were already apparent, and to the credit of USDA's long-term method of operating programs, acceptable. Over 1,000 participants in the eight regional forums were

a cross-section of the conservation and environmental sector of the U.S. economy. They identified 12 primary issues:

- A majority seek reform of agricultural commodity programs,
- Conservation compliance supported, but want more flexibility,
- Continue the CRP with more targeting for fragile acres,
- Concern about conversion of good land to nonfarm uses,
- Balance between property rights and environmental protection
- More technical assistance at the field level,
- Nonpoint source pollution is an important issue,
- More recognition of the risks inherent in agriculture,
- Urban voters have little knowledge of agriculture,
- Wetlands conservation is supported, but is causing concern,
- More linkage of policies, i.e. taxes, commodity, credit, and
- More emphasis on the "market-driven" approach to farm policy.

The SWCS publication *Agriculture and the Environment, Listening to the Grass Roots* is recommended for more details.

Recent public discourse, and the rush to diminish government and reduce burdensome regulations have ignored or deliberately camouflaged the nation's strong, and continued commitment to environmental protection. The politics of devolution and deregulation involves ideas and rhetoric that will not, I am convinced, stand the test of long-term public scrutiny. It is important to note that the message has been consistent. In poll after poll, for three decades, the American public does endorse "quality of life" issues. The January, 1995 Gallup poll

for NRCS found strong support for conservation. An AFT survey of over 1,000 farmers participating in the federal farm programs strongly supported continuation of conservation compliance requirements. There are others that probe views of the public on environmental issues. Of course, the concern over deficits, taxes, and other major issues, also dominate answers. We live and work in a complex society. There are no simple, one-line solutions to problems, including soil, water, and watershed conservation issues. The quest for solutions is, in many cases, more satisfying than the solution itself. That is why we leave options for the next generation, comparable to that left to us by those who have gone on before for we are standing on their shoulders and their accomplishments, and failures. Social trends here and abroad will, in my opinion, continue to have an influence on agricultural natural resources. The challenge is to understand the trend(s) and the potential impact on policy. The present thrust to reduce the annual federal deficit and, early in the next century to achieve a "balanced budget", will change, even eliminate, some programs. Coupled with a possible reform of the federal tax system, and further reduction of the people in the natural resource agencies, may result in the past sixty years of traditional conservation work being viewed as the "golden age".

A long-term outlook, as the world's population doubles and the state of the natural resource sciences improve, would suggest that need for natural resource conservation and protection will continue. A preventive strategy is less costly to society

rather than correcting resource problems caused by the unwise use of land and water for agricultural production. Hopefully, several of the more promising conservation concepts that are now available from dedicated people will be taken seriously by the Administration and the Congress in the 1995 Farm Bill. Actions resulting from the last decade of new conservation policy will be reviewed. The RCA process should strengthen a vision of America being that of a productive nation in harmony with a healthy land and a quality environment.

Major social trends leading to and during the last sixty years after the Nation enacted soil conservation laws:

Oct. 1929, Black Tuesday plunged Wall Street into chaos,

Oct. 1930, President Herbert Hoover tags \$45 million as relief for drought-stricken farms, and \$116 million to put unemployed Americans back to work,

Nov. 1932, Pledging a "New Deal" Democrat Franklin Delano Roosevelt wins the U.S. presidency by a landslide.

America 1933, Prohibition ends (it had not stopped drinking),

Sep't. 1934, Farmers in the Midwest panic after a severe nine-month drought,

May, 1935, The biggest single windstorm in two years hits the Midwest "Dustbowl" obscuring the sun east of the Appalachians,

1939-1945, World War II ends after the use of an atomic bomb on August 6, 1945. That war claimed 55 million lives and consumed untold material wealth,

The post WWII generations, Born to prosperity, television, and suburban mores, post-war babies exploded into adolescence with contempt for authority and love of rock and roll. A few trends cut across generations—including a dream of owning a home and a high divorce rate,

There was a G.I. Bill of Rights, a Marshall Plan to rebuild foreign nations, the Peace Corps, Viet Nam, Civil Rights, and the Women's movement on the road to equality,

Oil and the Middle East, jolted the U.S. into further thoughts about the limit of natural resources,

July 20, 1969, An American on the moon testing a whole new environment for humans,

The Tide of Technology, the arrival of the information revolution, and

The Genetic Revolution, the ability to manipulate genes.

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