

THE BEST USE OF AMERICA'S NATURAL RESOURCES--

Issues and Options

Mr. Martin - Ladies & Gentlemen

I'm like some of the main concerns about my grandkids for 20 years -

We meet in the Twin Cities at an appropriate time. The Minnesota legislature has recently given the Minneapolis-St. Paul Metropolitan Council powers never before granted to a multicounty authority in the United States. An intricate planning mechanism to guide the shape of this region to 1990 and beyond will be implemented. By 1980 each county, town, or city must draw up a comprehensive land-use plan. No one thinks a planning process to assure an area's orderly future growth will be easy to establish. The future will pose many pitfalls, as critical choices are posed for debate and decisions. We will be learning from your experience.

The quest for answers may prove more satisfying than the answers.

~~Any discussion of~~ the best use of America's natural resources

Best use Best use

immediately has to address the questions of: By whom; for whom; and for what? These of course, are more social than technical questions.

will need to determine how "we" visualize the "quality of life" and how we expect natural resources to be used and treated in order to support

that quality, (at a price ^{with the} + public acceptance so necessary for action.

implementation.

Society

Somewhat

Material for talk by Norman A. Berg, Associate Administrator, USDA Soil Conservation Service, at the 31st Annual Meeting of the Soil Conservation Society of America, Minneapolis, Minnesota, August 3, 1976.

These
 Such observations are not new. In early 1943, as I started work for SCS, Hugh Hammond Bennett wrote a story for the Saturday Evening Post entitled "Acres are Aces." The Chief pointed out that the crop producing lands "are the most important of man's earthly possessions," accounting for "only a fraction more than 11 percent of all the land on the face of the earth." His point was that the possession of these lands would be almost as important as guns in deciding who would win ^{the world} ~~the war~~. But even more than that, he said, "the use to which the world's croplands are put after the war will decide in great measure what kind of peace we shall have."

As we look back now, Bennett's words ^{do} take on the ring of prophecy. For the past several years, - as weather variations and energy prices have buffeted ^{crop} production and the continued growth of population and income have increased the demand for food, the retention of prime lands for agricultural production has become a leading land-use issue concerning not only the United States ^{& Canada} but countries around the world. Acres are still Aces, particularly prime acres. The need today is, in many ways, ^{even} more urgent than in 1943.

Later while serving as a Marine in World War II, I accepted an invitation to become a charter member ¹⁴⁶⁹ ~~of~~ ^{this} the Soil Conservation Society of America. SCSA's objective--to help advance the science and art of good land use--was important then. It is even more important today. ^{Experience} tells us "The land-use decisions of today become basic determinants of the quality of life tomorrow."

As such, they should not be made in ignorance. And they don't need to be. The science and art of good land use, through the efforts of this audience and our colleagues both past and present, has advanced immeasurably since our first meeting 31 years ago.

Any list of current national problems ^{are} is easier to define than ^{list them} let alone solve. In any discussion they include ^{without} ~~no~~ doubt:

- ① - The economy - inflation, unemployment, and how to meet the ^{rising} expectations of all peoples and all nations.
- ② - The energy outlook. { ^{supply - cost}
- ③ - Food and population. <
- ④ - Changing human and social values.
- ⑤ - Crime and corruption.
- ⑥ - Public Confidence in expanding governments and
- ⑦ - The Resource and Environmental Arena

2 Scandinavian
Oce. Division

of course

Each is related ~~and is~~ complex and will certainly be around ^{in some form} for a good while. Many of the ~~alternatives~~ ^{proposed} or solutions -- in turn will create new issues. It is increasingly evident that we ~~should~~ ^{need} not only ^{to} learn how to do things, but that we also ask a ^{very} basic question: What are the right things to do in a democracy? ^{Perhaps} ~~What is needed~~ more and more ^{we need} is not only the knowledge and skill to define problems, but to plan and design for the unexpected.

Dr. Chet Newland, Director of the Federal Executive Institute, said, "We must learn to live with all that we know and with the vastness of what we don't know."

For instance

The resource constraints of the present decade must surely teach Americans once more that (Conservation) economy is not out of date. We must learn again that increased productivity is essential to greater consumption. But we must also learn ^① to change consumption patterns, ^② to imagine different values, and ^③ to create new alternatives which are consistent with a free people, and for that there are sufficient continuities with our past to permit relevant learning from a rich heritage of experience." (5)

Our natural resource problems, to be sure, are more difficult. Demands on the ^{soil & water} resource base have never been higher and continue to escalate, while limits on resource supplies are coming closer to reality. The inescapable collision of unlimited demands on limited resources will test our will and our skill in making critical ^{conservation} choices.

I remain a realistic, optimistic
~~not pessimistic~~ about our chances to deal effectively with these problems. I am convinced that we have more technical skill, stronger institutional frameworks, and better public support for achieving wise land use than ever before in our Nation's history. The question that we ~~as a people~~ need to face is "what are we going to do to assure that these skills and institutions are properly used?" How do we, as a professional society, relate to those "by whom," "for whom," and "for what" types of questions *I posed earlier.*

will
 I would like to propose some possible answers to those questions for your consideration.

First, ^{however} it is ^{necessary} important to understand something of the current situation in regard to the use of land. It is imperative that we ^{help people in all pursuits} understand the complex nature of the land-use issue itself and have some feeling for the way in which important decisions are made. Finally, ^{as a Society} we must focus ^{on a} on a ^{sharp} narrow enough set of land-use issues that we can have some impact ^{at all levels of decisions, (& overall)}

Land use, as a common denominator touches virtually every social, economic, and environmental problem. If we let ourselves get carried away, however, and try to solve every problem for every issue all the time, we ~~will~~ dilute our effort to the point of ^{little value} uselessness. This suggests that we ^{try to} select only the ^{most} most important ^{timely} issues--those we have ^{where} some special competence ~~in~~ and give them our utmost effort.

I think ^{one possible} that choice is obvious. The retention of prime lands ^{for} for ~~age~~ production, while not the only land-use issue needing attention, is clearly one issue of increasing importance that ^{should} must be a primary concern of this Society. We need to ^{continue to} explore how this might best be accomplished.

Let's begin by looking at our current situation and briefly ^{to} examining some of ~~the~~ history ~~behind~~ it. The United States has about 2 1/2 billion acres of land. According to a 1969 report by USDA's Economic Research Service, 58 percent of that land is privately held. Of the private land, 21 percent is used as cropland, 27 percent as grassland, and 32 percent as forest land. ⁽²⁾ These percentages have changed very little over the past 20 years. The remaining 20 percent is used for all sorts of purposes, including urban and transportation,

2, 264, 000, 000
21
27
32
80

Don't know how well they perform

recreation and wildlife, or scenic and wilderness areas. Some of this other land is virtually barren, with soil and climatic conditions that preclude economic use, but much of it has been set aside for special purposes. These reserved lands, while not contributing directly to the production of food and fiber, are important elements in the quality of life.

21% of cropland, privately owned

But let's focus for a moment on the croplands ^{of this country}, and ^{try} to see what we ^{know} can say about their status. At the outset, I'll caution that numerical estimates must be carefully examined to see what lands are included in the estimate. Some estimates include ^{acres used for} cropland pasture, while others do not.

*Figures like
a B. B. King
only B. B. King
can not work*

The total U.S. ^{acre} cropland figure, as reported by ERS, has hovered around 400 million acres for many years, declining very slowly. This estimate masks significant land ^{use} shifts, however. The 400 million acres of cropland in 1976 are not the same acres that were farmed in 1949. As Krause and Hair (3) point out, cropland has been ^{released to other uses} abandoned in some regions at an average rate of some 2.7 million acres each year, while in other regions new cropland has been developed at the rate of about 1.3 million acres annually. There are many excellent references on this topic. I'll not ~~try~~ to cover the subject here, but the point I want to make is that the "cropland" in the United States is a dynamic land base. Even though the total acres remain roughly the same, many changes in the use of land have occurred and continue to occur.

*Prime land
Seminar Papers*

cite study process
 In a recent *study* estimate of potential cropland carried out by the SCS, (8)

several other interesting factors have been brought to light. (Using the

(definition of cropland) as used in the 1967 Conservation Needs Inventory (4)

and testing a selected sample of the 1967 CNI plots.) *this new study estimate*
 indicates a significant decrease in cropland acreage between 1967 and

1975. This decline, from 431 million acres to around 400 million acres,

appears to fly in the face of the "fence-to-fence" planting *all out production trend*

observed since 1973. Closer examination may, however, reveal some

possible answers. The CNI definition of cropland includes land in

① rotation hay and pasture, ② conservation use, ③ summer fallow, and ④ temporarily
 idle cropland. In 1967, 301 million acres out of 431 million were actually
 harvested. That left around 130 million acres that were either in other
 uses or suffered crop failure. Moving to 1975, the SCS cropland estimate
 indicates a reduction to about 400 million acres of total cropland, while
 the estimate of acreage harvested increased to around 330 million *acres*.

Thus, cropland harvested may have increased 10 percent in the past
 8 years (accounting for the fence-to-fence planting) while the total
supply of cropland declined almost 10 percent in the same period. This

could indicate that, rather than adding new *cropland* to the inventory, *grow crops*

farmers responded to the need for increased production by planting *that*

cropland normally held in ① rotation hay or pasture, ③ summer fallow, or

② conservation use.

Indications are that much of this land was marginal cropland, and

that bringing it back into *intense cropping use* production has resulted in *accelerated* erosion
 problems.

so & me believe this - 8 -

If this is ~~true~~, it means that U. S. farmers have ^{now} used ^{much} up much of their readily available "expansion" acres, ^{they} and now have less flexibility ^{on land use} than ^{choices} ever before. It also means that our current expansion has not been without its environmental costs. *< Serious soil erosion - Loss of valuable habitat*

Meanwhile, if these are accurate interpretations, what about all those other acres of potential cropland? The 1967 CNI identified a total of some 631 million acres of Class I, II, and III land. This indicated ^{well over} ~~at least another~~ 200 million acres above the 400 million ^{no. of traditional} ~~being~~ cropland.

Why are these acres still in grass or trees? The answers are complex, of course, but it is obvious that economic factors play a heavy role in whether or not private owners decide to go into ^{commodity type} crop production.

John Good land may exist in small units, or small ownerships, or in areas where the agricultural infrastructure does not exist. It may be held for other important land uses, or by owners who have no intention of using it for crop production.

About 2 million acres of farmland are being "irreversibly" lost each year to urban buildup, with an additional ^{up to} 1 million acres going under water in ponds, lakes, and reservoirs, according to the potential cropland study.

We learned some other interesting things in our potential cropland study. There may be about 385 million acres of "prime farmland" in the Nation. Of that ^{land} ~~total~~, about 250 million acres are currently cropped, leaving roughly 135 million acres of land ^{in trees or grass} that rate as prime farmland, but are not now being farmed. Why is this, in light of apparent demand for food? We asked SCS field people to identify these reasons, and their answers provide some important new insights.

*Dr. Momo
Pilot*

of Twenty-four million acres ^{there is} ~~were said to have~~ no apparent reason for ~~the land~~ not being farmed. No significant development problem could be identified. In addition, 45 million acres were estimated to be committed by the landowners to noncropland use. If these estimates are accurate, they indicate a whopping 70 million acres of prime farmland that are not being cropped simply because the current land users do not see it to their advantage to do so. *Trees & grass win out.*

What does this tell us? Do we really have ^{the} over 266 million acres ~~of~~ potential cropland ^{talked of since the 1950's CMI} that can be ^{clearly} fairly rapidly brought into ^{Crop} production if needed? The answer appears to be that we do not--that an estimate somewhere around 100 million acres is much more realistic.

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54
33
111

First, 24 million acres of "prime farmland" could be converted simply by beginning tillage. These soils would require little or no protection from erosion and, with normal rainfall, should produce high yields.

Second, there are an additional 54 million acres of "high potential" land that would require some soil and water management to prevent erosion and sedimentation or to dispose of unwanted water.

Finally, there is another 33 million acres with "medium potential" for conversion to crops. These acres pose more serious erosion hazards and water disposal problems and would cost more to convert. Nevertheless, soil conservationists see no reason why, with application of current technology, these acres could not be used for crops if the need arises.

This ~~still sounds like~~ ^{is still} a lot of land, but keep in mind that almost half that amount has been added to the cropland harvested in just the past 4 years. So, while it appears that we still have an ample land base for the reasonable future under normal conditions of climate, demand, and foreign trade, it is equally obvious that the days of complacency about America's cropland supply ^{should be - The Gen. said it} are over. Prime land is no longer a surplus commodity, if indeed it ever was. It is time to rethink programs, policies, and priorities!

The ^{U.S.} Department ^{of Ag.} ~~has~~ started this process, ^{several years ago & now} with the issuance of Supplement 1 to Secretary's Policy Memorandum No. 1827 on Land Use. ~~This supplement~~, dated June 21, 1976, ^{we finally have} is a strong statement on prime farmland, range, and forest land. It directs the Department's agencies to "advocate the protection of prime lands from premature or unnecessary conversion to other uses," and to "review their programs to insure consistency with the intent" of this new policy. We see this as an important first step, but only a first step, in a continuing process of involvement in land-use questions involving America's prime lands.

We recognize, of course, that the ^{ultimate} real responsibility for determining what land will ultimately be urbanized and that to be retained in agriculture ^{basically} rests with the private owners of that property operating under land-use (controls) of state and local governments.

Therefore, ^{statute} we have encouraged states to conduct prime lands workshops to draw out ^{Sec. Joseph and Use Comm has} the views of their citizens at the state and local level. (To date, two workshops have been held. More are planned for this coming fall.) Some of the things we are learning are of considerable interest.

We hear quite clearly that the perspectives on farmland differ greatly between the federal, state and local levels. And we get the message that even though these perspectives are different, they are all very real. In order to thoroughly assess the issues surrounding farmland, then, we need to ^{try to} understand all of these perspectives ~~and add them~~ to get a total picture.

> First, the National perspective ^{should be} is concerned mainly about the quality and quantity of land, rather than location. If we have enough corn land to meet National requirements, it is not a significant concern at the National level whether that land is in Maryland or Minnesota. It is in the National interest to ^{help} keep the most productive acres available for crop production should they ever be needed. National policy will be best served by encouraging continued production on those acres that give the highest return for each unit of energy and at the same time provide the most stable and nonpolluting environment for agriculture.

> A second perspective is ^{that} at the local level. ^{where we all live & work} Here the most important concern appears to be the protection of management options over land. Keeping viable economic farm ^{units} in production, protecting local economies, and preserving the nature of the community, including open space, visual quality and environmental quality ^{are} ^{truly} ^{local} significant issues. In many communities the retention of a lifestyle associated with agriculture is ^{or becoming} of key importance. Therefore, it appears that local values will often consider ^{whole} farm units rather than high quality acres. Communities may well prize a dairy industry even though supported by land of mediocre productivity.

Cite - Minnesota study

Somewhere between the local and National is ^{or should be} a state perspective, ^{much} more difficult to clearly articulate. In large measure, is it a concern for economic activity within the state? This appears to be most clearly felt in those states that are either unique in some respects, or else are at the end of the food delivery line. In Massachusetts, for example, they place high importance on encouraging the maximum possible productivity on their limited farmlands. They feel uneasy about the problems that can be created by a disruption of energy supplies or transportation systems or some other unforeseen event.

Another state perspective is based on the state's responsibility to provide the legal and policy bases on which day-to-day land-use decisions are made. Virtually every state is evaluating its current set of laws and authorities regarding land use to see whether the effect on agricultural land is harmful or beneficial.

There is also ^{of course} a "people factor." At one workshop, speakers speculated about the existence of "three cultures" in the debate. One group are the urbanites, looking out toward the farmland with a feeling of dependence, ^{uneasy at times} knowing that their future well-being and food supply depend on that land. These are also the people who prize open space and visual quality. Many of the current farmland preservation programs stem from these concerns.

Another viewpoint, however, is that of the production farmer, who sees the land as a basic part of his business.

In most instances, the land represents the farmer's most valuable asset and his major investment toward retirement. He, therefore, has mixed feelings about "preservation" programs. He recognizes that farmland must be retained for his business to survive, but at the same time he wants to be free to sell out for economic security. Therefore, a farmland retention effort that lowers the ability to sell his property--or greatly reduces its value--will generate real concern and opposition.

A third group of people view land as a necessity for survival in an uncertain world. The back-to-the-land movement, although it is difficult to quantify, appears increasingly significant in some parts of the country. More and more families are leaving urban areas to live on 10-, 20-, or 40-acre "farmettes" in rural America. The concerns of these people are land availability, land prices, and suitable technology for small agricultural enterprises.

What this suggests is a complex, plural issue that demands a complex, plural response. We need to develop many tools at all levels of both public and private endeavor. This issue is not a rural or farm problem and it's not an urban problem. It is everyone's problem.

(Retaining an adequate agriculture cannot be considered separately from developing an efficient, high-quality urban form.

v. (Land-use decisions regarding agricultural land are going to be made on limited information.

Assumptions - Washington D.C. Conf.

One tendency in the past, unfortunately, has been to see each land-use change as a single event and assume that each single acre lost is too small to be of any consequence. That is a dangerous strategy, however, that will need to be changed. Even though we do not know when the margin will be reached, or how serious our cropland problem will be at any given time, it is no longer acceptable to view our resource base as inexhaustible. There are limits, and we must respect them even though we can't firmly identify where they are. As a community and as a nation, we have the moral and ethical responsibility to avoid the waste of prime land resources for short term economic gain.

In response to these concerns, the Department has asked the ^{M.S.} Council on Environmental Quality to consider prime farmlands as an essential National resource to be considered in the development and review of environmental impact statements for federally assisted projects. The process of establishing National goals for preservation of certain types of land has led to restricting development on wetlands, flood plains, areas of archeological and historical significance, critical areas, coastal areas, and on and on and on. What this has done essentially is increase development pressure on the best farmland in the Nation. In our view that is no longer acceptable. This is not to say that there won't be any future development on farmlands, for (in some cases) there will certainly need to be. What we are saying, however, is that the Nation must begin to count the cost of developing farmlands and balance those costs against other options.

As we consider possible future actions on any land-use issue, whether it is prime lands or any other of the important land-use questions that we face, it is wise to continually remind ourselves what land-use issues are, and how they must be solved,

Land-use issues are underlying ^{or basic} issues. By that, I mean that under virtually every major social concern of our day, lies a land-use issue of some sort. Hunger is a major social issue, and it has many complex elements. The basic element, however, is the land. If you have the land (plus needed water) and you can use it to produce food, the hunger issue is not necessarily solved, but it is at least solvable. If you do not have the land, or you can't use it for food, any other attempts to solve hunger problems will be futile.

The same can be said of the problems surrounding community growth. Solving the land-use conflicts and problems do not guarantee that community growth will occur in an orderly and high quality manner, but unless bad land-use patterns can be prevented, orderly growth is not achievable. Good land-use decisions are, by their nature, necessary but not sufficient solutions to many of man's problems.

Land-use issues nearly always raise important dilemmas that we must somehow address. This Society, in an important and historic conference on National Land Use Policy held 4 years ago in Des Moines, Iowa, was reminded by Iowa Governor Robert D. Ray⁽⁶⁾ of the danger in trading personal freedom for environmental quality. The precarious balance between individual rights and public needs is always involved, and fuels intense controversies around virtually every land-use issue.

When the private actions of people--perhaps driven in many instances by the need to survive, either economically or physically--begin to add up to the detriment of all people, how and when does government take a role? Eckholm, in his new book entitled Losing Ground,⁽¹⁾ points out that people in the hungry nations of the world are overexploiting the land because if they don't, they will starve. If they continue overexploiting, they and millions of their countrymen will starve in the future as the soil and water systems lash back with flood, desertification, and sedimentation to render production still lower. Such is the nature of a true dilemma: Starve if you do, starve if you don't!

Our conservation issues in America, while not nearly so urgent and potentially tragic as those Eckholm describes, have some of the same characteristics. We can't lose sight of our original mission as conservationists. Retaining prime lands must be accompanied by prevention of wind and water erosion.

We cannot retain prime farmland in production without restricting somebody's right to build houses or factories on it. If that right is restricted--and assuming that there is a real demand for that land for development--the economic value of that land has been reduced. Who bears that cost? Some have said that government is the art of transferring the costs to somebody else. That potential certainly exists in many land-use situations.

So, we're back where we started on this issue. If better land-use decisions are essential for our nation to meet the increasing demands of a growing and more affluent population, as well as an expanding and hungrier world, how are we to do this? Who will make those decisions, and where will the costs come to rest? How far can we go in requiring private decisions to meet public standards?

There's a lot of loose talk about land-use planning, as though you could somehow plan better land use without ever having to exercise the control needed to make things happen differently. Such notions are pure flights of fancy. If the people of this country decide that government shouldn't control land use, then any notion that we can achieve much by "planning" is a false hope. To the extent that people will support governmental controls and actions, planning is then an essential part of that effort.

But what does this tell us, as a professional Society? Certainly the need to get a broader understanding of the science and art of good land use has never been greater. How are we to accomplish this?

In my opinion, this Society should ^{consider} concentrate ^{its} efforts ^{on} ^{the land use} ^{front} helping to ^{helping}

-- Gain broader public understanding of the need to base land-use decisions on reliable resource information.

--Continue to develop and refine methods of securing adequate resource data, interpreting facts into language understood by a broad spectrum of citizens, and presenting alternatives in a useful way.

-- Strengthen laws, institutions, and capabilities to deal with land-use issues--particularly in rural areas where these are generally weakest.

-- Help the American public understand the condition and extent of its most valuable asset--prime lands. To do this, we must concentrate ^{in each of our communities} on helping resolve such questions as:

incl. forest trees
Pilot study

- What are these lands? •
- Where are they?
- What is happening to them? *who owns*
- Are ^{L.U.} these trends harmful?
- Is anybody doing anything to retain prime lands?
- Who? How? Why? With what success?
- What should be done with them? Should we continue to let their future be determined in the market place as in the past? What kinds of costs will that inflict on present and future citizens? Should we take the necessary steps to keep them available for agriculture? If so, what kinds of costs will that require, and who will pay?

These are critical questions. And again they are ^{more} social, ~~not than~~ technical questions. They are going to have to be answered by political leaders, supported by public opinion and scientific fact. We can neither make the decisions nor guarantee the public opinion, but we can, as a Society, as individuals, and as professional workers, do a great deal toward contributing the necessary scientific basis for such determinations.

We're not faced with immediate crisis on our prime lands. Our country is not going to run out. We don't need to cry "wolf" on this issue. But make no mistake. The issue is here to stay. The decisions are going to get tougher, the stakes higher, the need for information greater. We may have some lead time now, but we must use it productively. As I said at the outset, I am confident that we have the ability, the capability, and the desire.

"...The Nation has enormous land and water resources to meet future demands--if steps are taken to implement more efficient management practices, if resource conservation measures receive adequate attention, if the natural resources themselves are protected against environmental degradation, and if conflicts among uses can be resolved."⁽⁷⁾



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Our Nation (We) ^{are} in a transitional phase with regard to land policy - and it would take a wiser person than I to see where we might be in 20 - 200 yrs from 1976. It will be a major issue we shall for certain be trying to identify & protect the public interest in these privately-owned lands

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