



Food and Politics: Business as Usual Has Run Its Course. What Are the Options?

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There are four public policies which shape United States agriculture. They are unwritten. Two of them are historically long-standing. Two are newcomers. The first is a policy of inexpensive, reliable and abundant food supply for the nation. Until recently, the second committed the nation to maintaining a healthy rural community of owner-operator farmers. The third, but more recent, policy is that of seeing food as a weapon in the arena of international diplomacy. The fourth, new and dominating, is to use food surplus as an instrument for maintaining national economic welfare through sales on international markets.

These policies and the political maneuvering that has maintained them for so long have run their course. They are now observed to be economically, technically, ecologically, and morally bankrupt. They are the opposite of respected Old Testament wisdom about dominion and responsibility for the restoration and preservation of the integrities of the domain. The farm debt equals the combined foreign debt of Brazil, Argentina, and Mexico. Annual U.S. farm gross earnings are less than 10% of this debt. The producers of our food and fiber (the farming community) are in an unimaginable economic and psychological crisis. Basic resources for food production (soil, water, genetic stability) are eroding at rates that far exceed the losses suffered at the height of the dust bowl years...the dirty thirties.¹ Contemporary U.S. agriculture is but another, yet very alarming, chapter in what W. C. Lowdermilk referred to many years ago in *The Conquest of the Land through Seven Thousand Years*.²

The question before us during the closing years of this decade is not about the viability of prevailing agricultural policies. That issue is clear. They are desti-

¹For an excellent description of these losses, see R. Neil Sampson, *Farmland or Waste/and: A Time to Choose* (Emmaus, Penn.: Rodale, 1981).

²W. C. Lowdermilk, *The Conquest of the Land through Seven Thousand Years* (Washington, D.C.: U.S. Government Printing Office, 1953).

tute after running their neurotic course. Rather, the question is, where do we go from here?

The crisis in food supply and the politics of food is worldwide. The global reality of food deficits, desertification, and convulsive agricultural economics is obvious...from the tragedy and famine of the series of wide-spread African droughts to the loss of agricultural land across Latin America, Southeast Asia, the glut of grain, dairy and swine products of Western Europe and shortages of foodstuffs in Eastern Europe and across the Soviet Union. Looming just over the horizon is the seemingly unavoidable collision course of a world-wide petrochemical dependent

food technology with petroleum resource exhaustion.³ When one ponders the issues of genetic truncation and atmospheric resource stress, the scenario becomes awesome in its dimension.⁴

Adequate problem analysis is essential for needed response. Thus, thinking about the “politics of food” suggests three tasks. The first is to bring adequate global and national perspective to the subject. The second is to review the recent history of the politics of food policy and the national agricultural research establishment. The third is to articulate a vision about alternatives...to search for possibility in the midst of crisis. In this process we can find our way in prophetic witness. As Lester Brown has so prophetically stated, “Effective leadership in a time of rapid change demands not only a vision of the future, but the capacity to communicate that vision.”⁵ He goes on to say:

The effort to put the world on a sustainable basis will take years of rapid, perhaps convulsive, economic and social change. Success in restoring a sustainable society will depend on the willingness and ability of political leaders to help their constituents understand change, why it is inevitable, and how to influence its direction....Without a proper understanding of the forces driving change, governments fail to respond to emerging problems and problems become crisis....Ideology is not a substitute for intelligent, responsible policy. Pragmatism is the order of the day.⁶

I. PERSPECTIVE

Forgive me for personal references, but they do help in the communication process of enabling the reader to appreciate the reflections of the writer. I was born at a time in history when half of the world’s original soil resources were gone. My birth was only 2,500 years after Plato lamented the loss of forests, springs, and soil of his beloved city-state, and about 2,000 years after the Roman generals oc-

³For a full discussion of this collision course, see the essay by Lovins, Lovins, and Bender, “Energy and Agriculture,” *Meeting the Expectations of the Land: Essays in Sustainable Agriculture and Stewardship*, ed. Wes Jackson, Wendell Berry, and Bruce Colman (San Francisco: North Point, 1984); and David and Marcia Pimentel, *Food, Energy and Society* (New York: Halsted, 1979).

⁴Cf. Norman Myers, *The Sinking Ark: A New Look at the Problem of the Disappearing Species* (New York: Pergamon, 1979); Stephen H. Schneider and Lynne E. Mesirow, *The Genesis Strategy* (New York: Plenum, 1976); and Lester R. Brown and Edward C. Wolf, “Reversing Africa’s Decline,” *Worldwatch Paper #65* (Washington, D.C.: Worldwatch Institute, June, 1985).

⁵Lester R. Brown, *The State of the World, 1985* (New York: W. W. Norton, 1985) 245.

⁶Ibid.

cupied North Africa, got into the grain trade, and in the process destroyed the fragile grain belt of North Africa. The western colonization of the savannah regions and tropical coastal communities of Africa took place about 175 years before my birth and set into motion the tragic drama of the 1960s to the 1980s of desertification and famine. During the past 100 years, the Pacific islands were converted from food-producing ecosystems to copra, spice, and cocoa plantations, and South East Asian archipelagoes converted to rubber and tea productions.

Here on the North American continent, landscapes were to be conquered. Fortunes were

to be made. Three hundred years ago it was the buffalo which was exterminated in the process of agricultural product exportation, then the fragile prairie sod was busted. Grains, imported from far-off places and different habitats, were carelessly introduced into this "New World." There were no questions raised about environmental impact. These questions came along 200 years later. Seventy years ago and forty years ago, great wars had to be fought, European armies and nations had to be fed. European continental warfare destroyed food-growing capacities, as do all wars in all places. To the south, on another continent, ancient civilizations and their complex tropical agricultural technologies were destroyed in the conquest for gold, and today savannah lands are destroyed for cattle for fast-food restaurants. The tropical forests of Central America and the Amazon basin were felled.

I was born during the period of the later years of the deforestation of the highlands of China. By the time I could read the newspapers and listen to the radio, the low fertile rice paddies along the Yangtze and Yellow Rivers were flooding because of the loss of these forests. Thus, I witnessed the massive famine of China.

At the time of my birth in 1930, many members of my family migrated from the plains of the "Great American Desert" to California. They were burned out and blown out. The bison were gone, the sod was gone, the rains failed, and the winds blew once again. The highly productive system of species of grasses and animals that evolved over hundreds of thousands of years was destroyed. But irrigation water had come to the southern San Joaquin Valley of California, and again the slogan "new fortunes could be made." I was born into a family whose industry was that of producing chemical fertilizers. At the age of 14 I helped my uncle do fertilizer trials for potato, cotton, and corn farmers. In those days a farmer had to be convinced that fertilizer would increase yields and profits. Now, mid-way through my life, to keep from bankruptcy, a nine-fold increase of fertilizer is essential to maintain the yield-materials which are derivative of nature's non-renewable resources of oil and gas (materials which are depleting to the point where we can predict their dis-use by the middle of the next century...a period of your lifetime). But now the problem intensifies. In this fertile valley of my youth we now experience the salinization of 400,000 acres of prime land as a consequence of irrigation systems with inadequate drainage. We are experiencing the waterlogging of thousands of acres of orchards, and everywhere, globally, there is the annual oxidation of 100 million tons of nitrogen from our fertilizers which go into our food system, which in turn threatens the integrity of the biosphere's protective ozone shield which is

located about 30 miles above. It is this shield that protects us by governing the flow of incoming infrared light.

Following my college and university years in agronomy, theology, and ethics, the specter of a hungry population in Central Africa demanded my response. There, for the next 20 years, I found soils that were very thin, infertile and ecologically fragile, impacted with the pressures of high rainfall, humidity, temperature, and growing numbers of people from everywhere, with their cattle, goats, camels, donkeys, and industries of timbering, mining, sugar cane, tobacco, pyrethrum, tea, coffee, groundnuts, and cotton. All these crops and industrial activities were developed without reference to human and environmental impact. Furthermore, roads, bridges, and harbors were designed for a one-way traffic...agricultural and mineral product export to the

industrial centers of the colonial metropolises. All this took place upon soil structures which were not, geologically speaking, youthful like ours in northern latitudes. The soils of the tropical world have never been renewed by geologically recent movement of glaciers and redeposited into youthful soils. Most of the world, and all of the tropical world, is NOT like Minnesota, Illinois, or Indiana! To the contrary, where I lived and worked in the equatorial world for almost two decades, and where most of the human family lives, the soils are ancient, highly weathered, thin, and infertile. Clearing forests and grasslands for annual plowing and the growing of cattle and maize, millet and sorghum simply adds to the acceleration of the history of the irrevocable loss of the earth's original soil deposits. I began to understand, in the late 1950s, Plato's reference in the *Critias* to deforestation and the drying of springs. I began to realize that what happened in Greece and the other nations bordering on the Mediterranean (and then upon the regions of the Fertile Crescent) was also happening where I stood in the southern and central parts of Africa. Indeed, the continents are "drying out."⁷ Sometimes they flood in the process, as we have seen in parts of Oklahoma last year, or in previous years downstream on the Ohio, Missouri, Red, and Mississippi.

By the late 1960s I witnessed upon the continent of Africa what my family saw just prior to my birth. No rains, but high wind. The original grass and trees were gone; the pressure was on the land as a consequence of 200 years of colonial agricultural industrialization, the consequence of human and veterinarian health care, but social neglect and human exploitation results in runaway human populations. It was easy to build hospitals and eliminate smallpox. It is quite another matter to build relevant educational and agricultural systems, lift the cultural status of women, and all of the other social responsibilities related to meeting basic human need.

In the late 1960s our attention was turned to the realities of drought and famine upon the western Sahel. Today the same tragic history repeats itself in the East within the Horn of Africa. Hunger heavily impacts at least one-third of humanity. In Africa today 24 nations face severe food shortages.

During the 1960s and early '70s the Humboldt current failed, and the anchovies along the Chilean and Peruvian coast were in short supply. China and the Soviet Union needed additional grain. Also, during this decade, the price of

⁷L. Brown and E. Wolf, "Reversing Africa's Decline."

crude oil jumped by a factor of ten. Since fishmeal from Peru and Chile did not make it to the dairy, pork, and poultry sheds of Western Europe, American soybeans substituted. Since grain went to nations that had experienced a long winter season, there was no food grain in reserve for the food-short former colonial nations of the tropical world. There was even a shortage of nitrogen fertilizer. It took a United Nations Conference, held in Rome in 1974, to help resolve the immediate world food crisis. Then Secretary of Agriculture Earl Butz promised the world that the U. S. would plow from fence row to fence row in all-systems-go for full production of food grains. So the remaining prairie sod was busted on the outer fringes of the high and dry plains, while the terraces and some windbreaks were converted to more grain. We were "to feed the world."

We had anew cause! The collision course with disaster was set into motion! While I was serving in Africa from 1956 to 1973, 85 new nations were born...all former colonial possessions.

Today they are all food-deficit (hungry) nations. Plows, tractors, and more cattle were exported to help these nations try to feed themselves. But it was the wrong technology. The deserts have continued to expand as a witness to this fact. Although we saw the problem emerging, two things happened. First, funds for research and development for a regenerative and self-reliant food system in the hungry world were committed to space exploration, moon walks, and the proliferation of nuclear and conventional weaponry. Now it is funds for “Star Wars.” For reasons to be stated below, very little research was conducted to learn how to grow food on a regenerative basis...and we still do not know how! The only previous research was for rubber, tobacco, and sugar! The second thing that happened was that there was a massive increase in American and European grain production. There was a hungry world out there to consume our surplus! There was a market to penetrate! As in the days of the First World War, fortunes could be made, and Dreyfus, Cargill, Bunge, and other giant grain traders knew it. Secretary of Agriculture John Block said: “We are in a growth market!” Ah, the magic of the market place! Today we must realize that economics does not address the health of the landscape. Rather, today, in our world view, the landscape has everything to do with economics! Even the State Department knew that there was a market out there...a way to balance our deficit of payments. The market was good for a couple more years. Consequently, the price of agricultural land skyrocketed in the early mid 1970s. “Get big or get out” was the advice of the Secretary of Agriculture. So, based on a paper inflation, banks encouraged farmers to borrow...“get big and modernize.” So many did. They were following trusted advice about the world situation that they could not adequately judge for themselves, nor could anyone else for that matter. Then China and Russia experienced favorable climatic conditions once again and had good grain harvests. The Soviet Union invaded Afghanistan. The U.S. laid on a grain embargo. The debt-ridden poor nations got poorer and could no longer afford to purchase grain. International assistance programs were faltering. Western Europe, from the Mediterranean to the North Sea, came on heavy in the international grain market. With a ten-fold increase in the cost of oil, and the reality of a petrochemically dependent agricultural technology that evolved during the heady days of the “Green Revolution,” the costs of production for grain (all agricul-

tural products) soared...to the equivalent of two bushels of topsoil and a quarter barrel of oil per bushel of grain produced. This does not count the cost of new giant machines and ever-growing increments of pesticides and herbicides.

From the time that the anchovies failed in the Humboldt current and the high winds of the Sahel began to blow once again, our nation began to borrow heavily from its citizens and the citizens of other nations, thousands of millions of dollars for weaponry build-up. Interest rates soared. So have mortgage rates and mortgage payments of the previous years of modernization and expansion. Now U.S. agriculture is “busted.” The U.S. farm debt is \$225 billion. The estimated gross income this year is less than 30 billion dollars. The national debts of Mexico, Argentina, and Brazil amount to the same as the U.S. farm debt. To help our balance of payments internationally, we must sell grain. The price has to be competitive on the world market. Thus it is that we now observe that U.S. agriculture is in a “Third-World” category. What a strange and terrible turn of history. Congress now sets the parity price which is below production costs. Crop loans are based on this deflated figure. Thus, bank foreclosures on the farm family across the

U.S. and the tragic history of agriculture continue. Since World War II, five million farms have disappeared. Agriculture continues to be colonized everywhere. Decisions about what happens on the U.S. farm are made in distant places. The wisdom, memory, and vision of the farming community is disappearing. Desertification goes unabated. We convert prime agricultural land at 12 square miles per day for parking lots, shopping malls, highways, and urban and industrial sprawl! Soil erosion is about 25% greater than in the “dirty thirties.” Water reserves west of the Mississippi are being depleted at 30% greater than recharge. When I reach 70 years of age, given present structures and systems and physical realities, only 4% of the earth’s surface will remain arable to feed and clothe more than six billion persons. This is the dimension of the crisis. We can hardly measure the impact of the oxidation of as much nitrogen in our fertilizers as equals global natural nitrogen fixation upon our ozone shield and groundwater, supplies, or the build-up of atmospheric CO₂ from deforestation, annual plowing, and industry, or the build-up of atmospheric dust and reflectivity of solar light from denuded landscapes. We cannot measure the loss of grass and forest cover and the earth’s capability to produce atmospheric nitrogen and absorb CO₂. All of this is unfolding while our Congress cranks out farm bills that, at best, are irrelevant to correcting the negative aspects of agricultural history and the critical issues of our time. At worst, U.S. farm bills help maintain the destructive trend of agricultural history.

The lessons are clear:

1. Most of us do not understand agriculture: what it is, and what it is for.
2. We must understand the dynamics of agriculture if we are to survive as a civilization, and as a global community of nations, and to preserve the integrity of the earth’s evolutionary history and process.
3. We cannot discuss current realities intelligently outside of our global, ecological, and agricultural historical context.
4. As yet, humanity has no blueprint for agricultural rehabilitation and

development. As Wes Jackson said so appropriately: “Agriculture does not have problems. Agriculture is the problem.”⁸

5. We have to envision a whole new agriculture.

II. HISTORICAL REVIEW

In view of what has just been said, the following questions arise: How can opportunity be wrenched from the crisis? Where do we go from here? What are the options that can be responsibly advocated?

To get at these questions it is important, first of all, to do a quick review of the recent history of our national agricultural policies and agricultural research establishment. I am grateful for the work of John G. Peters, Professor of Political Science at the University of Nebraska, for his historical trackings of U.S. farm policy, and how they emerge. Briefly, he points to the basic fact that farm policy reflects the interests, wisdom, insights, and vision of Congress, the president, and farm constituency (the farmer, rural community, and urban consumer). As a result, and this point is so very important, we observe through the years a constrained discussion about supports, markets, small and large farm interests, and social philosophy. We observe debate over issues which are symptomatic of causal problems which thus go unaddressed, year after year.

The discussion is further governed by national and world demands. Nowhere does the conversation address the larger issues which constrain the development and inhibit needed change in American agriculture...issues which are discussed by the other contributors to this volume. Discussion about U.S. agriculture takes place in the House and Senate agricultural committees, subcommittees, the lobbying core, and interest groups. This discussion ultimately takes the form of agricultural food and farm policy.

There is a double emphasis. The first is on small farms, the rural community, social welfare, and the democratic society. The second is on the market needs of large producers and crop production efficiency. Efforts are constant in the area of stabilized farm income, commodity production and surplus, with a peripheral struggle about who farms, what is farmed, and how much is farmed.

Each presidential administration makes its emphasis. In the Truman years it was on flexible but permanent controls on parity, with an eye on the welfare of the small family farm. The defeat of the Brannan plan by powerful interest groups shifted the emphasis away from the small producer. During the years of overproduction in the Eisenhower era, the emphasis was on the soil bank and acreage reserves. This was later undone by the international food crisis of the late 1960s and early 1970s. During the Kennedy and Johnson years the emphasis was on supply management which was in reality a flexible version of parity policies. The Nixon years instituted an emphasis on a market-oriented farm program. Legislation to protect the small farmer was weakened to the advantage of the large producers. The Ford administration felt the decline of worldwide prices for agricultural commodities and the beginning of the farmer strike movement. Policy was made around commodity interests in cotton, wheat, soybean, corn, meat, and dairy products.

⁸Wes Jackson, *New Roots for Agriculture* (San Francisco: Friends of the Earth, 1980) 31.

During the 1970s the global situation was one of food deficits. The shift was made from small farmers to agribusiness activities. During this time, budgets and grants were cut for agricultural research for the benefit of the public sector, while the private corporate sector did its own research and development—an activity which has influenced in a massive way the direction that agriculture has taken, an activity which I shall discuss below. During these years the Poor People's Campaign for school lunches emerged under the leadership of Ralph Abernathy. The Senate Select Committee on Nutrition and Human Need was developed under the leadership of Senator George McGovern. Early in this present decade of the 1980s there was a growing concern (which continues) in the field of consumer protection, land and water use, and agricultural tax structures. At the time of the writing of this essay, the 1985 Farm Bill is gaining full attention. The debate and forthcoming legislation will reflect the present farm crisis, with consequent effort to deal with momentary issues of finding ways to fund the several farm loan programs which will cost from 40 to 70 billion additional dollars...a "budget-busting" situation in a period of national history of unprecedented budgetary deficits. At the same time, efforts by the agricultural committee and subcommittee struggle to find crop-subsidy programs that will enable the U.S. to remain competitive on the world agricultural commodity market. As one of the younger members of the House so candidly and accurately stated: "We haven't done too well with the same old stuff the last few years."⁹

All of these issues are of critical importance. They all illustrate the point that the “politics of food” involves responses to the consequences of major problem areas in U.S. agriculture. Food politics does not respond to causality...to structures and fundamental assumptions about the nation’s agricultural system upon which these structures are built. Until this impasse of political decision and agricultural policy-making is broken, at best the crisis in American agriculture will continue to deepen. We wonder how much longer it can languish before unimaginable losses will be experienced.

Behind the more surface issues in the arena of the “politics of food” is the nation’s agricultural research establishment. We should all be indebted to Laurence Busch and William Lacy for their work in this area.¹⁰ Their findings provide tremendous insight for understanding how the national agricultural debate has become so seriously limited to immediate, surface issues which in turn inhibit the nation from addressing fundamental assumption patterns which underlie our agricultural structures and systems. I feel it is tremendously useful to bring to the reader’s attention the findings of this work.

In 1981 Busch and Lacy mailed a well-developed survey to 2,000 agricultural scientists in the public sector of the agricultural research establishment. Incredibly, the two researchers received a 76% response, and in some cases extensive replies in those parts of the survey where extensive written statements could be submitted. The purpose was to obtain a careful reading on the degree of discrepancy between the relationship of work in research to stated USDA

⁹Quoted from the *Los Angeles Times* article, “Congress Faces More Obstacles in Shaping Farm Aid Bill” (September 4, 1985), section 1, p. 7.

¹⁰Lawrence Busch and William B. Lacy, *Science, Agriculture, and the Politics of Research* (Boulder, Col.: Westview, 1983).

goals for research, criteria for research project selection, and actual project commitments. The researchers were quick to state that the relationships between goal and specific criteria for problem choices are complex and cannot be reduced to a simple causal relationship. But findings, even tentative, are insightful and give reason for the need to review the system.

The USDA research goals were identified:

1. Increase agricultural productivity
2. Protection of forests, crops, and livestock
3. Decrease costs of production
4. Expand agricultural product demand by developing new production or enhancing product quality
5. Improve marketing efficiency
6. Expand export markets
7. Assist developing nations
8. Protect consumer health and improve nutrition
9. Improve the level of living in rural America
10. Promote rural community improvement

The following criteria were developed by the researchers for project selection and then

related to the USDA research goal statement:

1. Enjoy doing this kind of work
2. Importance to society
3. Availability of research facilities
4. Scientific curiosity
5. Potential creation of new methods, materials, and devices
6. Publication probability in professional journals
7. Client needs assessed by you
8. Likelihood of clear empirical rules
9. Funding
10. Evaluation of research by scientists in your field
11. Priorities of the research organization
12. Potential contribution to scientific theory
13. Demands raised by clientele
14. Credibility of other investigators doing similar research
15. Currently a "hot" topic
16. Length of time required to complete the research
17. Potential marketability of the final product
18. Colleagues' approval
19. Publication probability in experiment stations or research service bulletins and reports
20. Feedback from extension personnel
21. Publication probability in farm and/or industry journals.

The responding scientists' order of ranking is informative. In terms of goals, their highest rank was for the development of new knowledge and improved methodology as the most important goal for agricultural research. The second was increased agricultural productivity in terms of crops and livestock.

The promotion of community improvement, improvement of marketing efficiency, and the extension of export markets ranked lowest as research goals. In terms of criteria for project selection, the ranking was: (1) enjoyment of doing the work, (2) improvement of society, which was clearly correlated with the likelihood of clear results and marketability of the final product, (3) availability of research facilities, and (4) scientific curiosity. Busch and Lacy found that community improvement or improved levels of living are not important goals. There were no responses to indicate interest in long-range concerns. There was high ranking for publication probability in professional journals, though not farm or industry journals.

Of highest correlation were peer approval, career advancement, and utility in production efficiency. Busch and Lacy point out that research criteria are based, not on value choices or systematic ethical formulation, but on client orientations, scientific ideas, peer approval, career advancement, and utility. There were indications that many of the scientists were unaware of strong alliances with vested interest groups. Their criteria for project selection are based on the interest issues of the research facility, personally assessed scientific importance of the problem, feasibility of arriving at solutions, and the importance of avoiding error-prone fields. The

scientists were working on problems which look possible to solve and where support funds can be found. Selection is based on anticipated critical reaction of peers and the prevailing politics of administrative climate. Decisions are not made on perceived value issues, but rather, a reflection of a general ethos. The decision of the scientist is made around client needs rather than careful inquiry into problems being experienced by various client groups. Perceptions about what is needed by the larger society are not formulated through systematic investigation or formal feedback. Rather, their needs (of the larger society) are addressed by the researcher and then projected onto the larger society. The question of importance to society is statistically linked to relatively narrow issues of the utility factor. Finally, it was found that most scientists tend to see goals such as community improvement and improved levels of living and nutrition as neither the subject of their own inquiry or as intrinsically important. The broader goals, criteria for research, tend to be regulated to one or two disciplines and are not integrated conceptually with those of the other sciences. Furthermore, these disciplines often have fewer scientists and are considered to have a more marginalized role in the agricultural science system.

Of particular relevance to the subject of the “politics of food” is this finding:

Research on the improvement of the level of living in rural America and the promotion of community improvement appears to be overwhelmingly the province of scientists in the social sciences.¹¹

To gain an understanding of the magnitude of this finding, and the neglect of issues to which it points, Donald A. Dillman and Daryl J. Hobbs have identified nearly 100 critical social and structural areas of U.S. agriculture awaiting sig-

¹¹Ibid., 190.

nificant research.¹² By comparing the works of Busch and Lacy with the essays edited under the leadership of these authors, one can begin to gain understanding about the depth of the tragedy of the truncation of the “politics of food” in the U.S. today. One can begin to understand how our agricultural politics has made a shift which now focuses almost exclusively upon the newcomer in agricultural policy concerns: food surplus as an instrument in maintaining national economic welfare. The policies of maintaining a flow of inexpensive, reliable, and abundant food supplies, the maintenance of the welfare of the farming community, and the use of food as an international diplomatic weapon have had to give way for the present effort to find markets for agricultural surplus, which in turn will hopefully reduce the need for commodity price subsidy (a global phenomenon), and to function as a significant means for contributing to the solution of the historically unprecedented national budget deficit.

III. VISIONS ABOUT ALTERNATIVES

The logic of assumptions of our present agricultural structures, which give emphasis to what is commonly called production efficiencies for the generation of wealth, has run its course. That is to say that our commonly shared point of view—our preoccupation and pre-conception about our agriculture—is being observed to be dysfunctional and self-defeating. The world food and agricultural crisis provides us all with an opportunity for significant change. We have the

biological tools of understanding with which to work—tools that humanity did not possess in the past. The vision of a regenerative global common unity, with a regenerative agricultural system, is our working vision. Aldo Leopold, in the early years of this century, set us in the proper direction when he said:

A thing is right when it contributes to the integrity, harmony and beauty of the biotic community. It is wrong when it goes the other way.¹³

This insight needs to be foundational in ethical judgment and normative formulation for human behavior.

In order to change the course of agricultural history (and the course of the history of civilization itself), we are required, first of all, to make a shift in our fundamental base of assumptions about our orientation as a person in relation to the earth.¹⁴ This is a philosophical, ethical, and theological task. As our self-understanding shifts, so shifts our science and technology. Thomas Kuhn helps us understand this dynamic.¹⁵ We can see this reality at other moments in history. Basic to the vision of a regenerative agriculture, an agriculture that not only preserves, but increases its essential resource base of soil, genetic diversity of plants and animals, water reserves, and purity of air is the understanding that

¹²*Rural Society in the U.S.: Issues for the 1980's*, ed. Don A. Dillman and Daryl J. Hobbs (Boulder, Col.: Westview, 1982).

¹³Aldo Leopold, *A Sand County Almanac* (New York: Oxford University, 1949) 242.

¹⁴See C. Dean Freudenberger, *Food for Tomorrow?* (Minneapolis: Augsburg, 1984), parts II and III.

¹⁵Thomas S. Kuhn, *The Structure of Scientific Revolutions* (2nd ed.; Chicago: University of Chicago, 1970). He makes a classic statement about this needed philosophical (paradigm) shift.

the earth is a living organism, the only life in the universe. What a marvelous, spectacular mystery! The Hebrews reflected the accumulated wisdom of the ancient mid-east, as well as many cultures of our time (including the Native American), in their understanding of righteousness.¹⁶ Righteousness was an ecological understanding about the maintenance of natural integrities; note the 104th Psalm as an illustration. Basic to the vision of a regenerative agriculture is a renewed (not new) understanding of the human purpose. It is to see ourselves as participants, with all other life forms, in the ongoing process of creation. “Cultivate” means to “nurture.” “In God’s image” means to share responsibility. “To have dominion” means to be responsible for the maintenance of human justice *and* ecological righteousness (right order) in the domain of God’s creation. In the ancient paradigm, which it seems to me we must reconstruct if we are to survive, the idea is that the earth belongs to God—it is a manifestation of God’s creation. All life has purpose and meaning for the creation and the Creator. Ownership of land assumes inter-generational responsibility for the land. Land is to be kept in trust, and we are all trustees. We see these old reflections in such contemporary writings as James Gustafson’s two-volume work on “theocentric ethics.”¹⁷ To be fruitful and multiply has everything to do with responsible vision and behavior in the domain, behavior which regenerates and preserves. Thinking in these so-called theocentric frames of reference enables us, in our time, to think “biologically.” With this orientation, or spirituality, or ethos, we are able to focus once again on the

issues of “carrying capacity” (instead of yields per acre and profit margins), “Biotic Community Management,” “Agro-ecology,” and “integrated farming systems.” Our perspectives enable us to understand the paucity of prevailing neo-Keynesian economic thought, and to see that economic systems must serve the land, just as they ought to intentionally, consistently, and coherently serve the meeting of what we call “basic human needs.” We have to ask: “What are basic land needs?”¹⁸

With a paradigm shift, from seeing ourselves set apart (outside, aside) of the “land,” to understanding ourselves as participants within the delicate and interdependent structure of the “land,” we find ourselves shifting from preoccupations about “freedom” to preoccupations with understandings about responsibility, and in turn, preoccupations with questions about how the human species expresses gratitude for life in its historical moment of creation.

All this is simply to point to the fact that agriculture and its future has everything to do with biblical theology, philosophy, and ethics. This is why, for an example, the Kellogg Foundation (a pioneer in Land Grant College development) is now funding initiatives in agricultural studies within the private and public liberal arts colleges.¹⁹ Fundamental to a new agriculture, one that holds promise to turn a 7,000 year history of destruction into a regenerative, post-

¹⁶For a complete discussion, see Odil H. Steck, *World and Environment* (Nashville: Abingdon, 1980) and Claus Westermann, *Elements of Old Testament Theology* (Atlanta: John Knox, 1982).

¹⁷James M. Gustafson, *Ethics from a Theocentric Perspective* (2 vols.; Chicago: University of Chicago, 1981-84).

¹⁸See *Meeting the Expectations of the Land*, ed. W. Jackson, W. Berry, and B. Colman.

¹⁹See *Cultivating Agricultural Literacy: Challenge for the Liberal Arts*, ed. Gordon Douglass (Battle Creek, Mich.: W. K. Kellogg Foundation, 1985).

petroleum, post-modern history, is a renewed world-view. This shift depends upon the commitments and wisdom of everyone, in every discipline. Agriculture is not a discipline, technology, science or responsibility, exclusively assigned to the farmer and the agricultural college establishment, or to the agricultural committee of the nation’s Congress. It is a responsibility of everyone. A farmer is to a nation as a soldier is to an army. A vast system of support is essential for the critically important function of the individual.

It is envisioned that tomorrow’s agriculture will be designed to be a “human process” of combining the energies of the sun with the chemical and biological life of the soil and vegetation and animals in the production of essential food and fiber for the “purpose” of making possible the development of the potential of human life in the common unity of all life. The farm will be understood as an integral part of the whole biotic community of soil, water, air, vegetation...an essential organism which produces essential elements for the health of the whole.²⁰ In farm policy the farmer will be understood and supported as the manager of a specific biotic community. There will be a prohibition of foreclosure in order to maintain critically important social values and technological skills. In farm policy rural communities will be understood as physical and aesthetic support centers for these environmental and resource managers. In farm policy the priority of a nation will be in the maintenance of and preservation of the rural community and the health, in all its diversity, of the land and its future. It is interesting to note that the French Republic made a constitutional change twenty years ago to insure the health of the small farmer

(the essential manager of the micro-ecosystem) and the rural community. Denmark is undergoing that process now.²¹ This vision of which I speak is not futuristic; models now exist. Our responsibility is to free ourselves from our cultural, political, and technological ghettos and to inform ourselves so that we can get on with essential changes for goal achievement.

In anticipated future farm policy there will be the commitment to the achievement of a regenerative agriculture, an agriculture where, perhaps, upwards to 30% of a nation's population will be carefully put back on the land. This will require the total reorientation of our nation's land grant college system of research, education, and extension focused on family farming systems. The development of laws will prohibit the conversion of prime agricultural land (Classes I-III), and will lead to the investment of the nation's tax wealth into programs of soil preservation (more than conservation), reconstruction of biologically diverse cropping systems, rebuilding the nation's water and air resources, and a move toward a perma-culture. This thinking is the opposite of present trends and politics in the centralization of production marketing, factory farming, and petro-chemical and capital intensive, mono-cultural production systems. "Efficiency" in farm policy will be measured in terms of degrees of resource regenerativeness, not yields per acre or margins of profit for investments. The economy and agricultural technology will be geared to

²⁰See Wes Jackson, "A Search for the Unifying Concept for Sustainable Agriculture," *Meeting the Expectations of the Land*, ed. W. Jackson, W. Berry, and B. Colman.

²¹See Ann L. Strong, *Land Banking: European Reality, American Prospect* (Baltimore: John Hopkins University, 1979).

guarantee the health of the land and the stability of those entrusted to cultivate the land...a common and inter-generational heritage.

Economically, a "sacred cow" in the American society must be put out to pasture. That is to say, the national farm policy of abundant and cheap food supplies must give way for a price system which covers adequately the cost of a regenerative technology, including dignity and long-range stability of the biotic community managers—the farmers, the farm family, and the farm community center. A regenerative food system, of course, rests within the reserve carrying capacity of every ecosystem. Thus, to make any progress, the U.S. will have to develop farm policy to reduce present levels of annual crop production ultimately by nearly 50% in order for it to comply to the norm of a regenerative carrying capacity.

A regenerative agricultural policy displaces the idea that we produce for surplus and the accumulation of international currency from the sale of surplus. Agricultural policy needs to be designed to meet the local needs of the human habitat and biotic community. It cannot continue to be part of the formula of international balance of payments, which is an activity for the maintenance of present national and personal life styles of high luxury and military security at high costs and environmental and non-renewable resource stress.

In terms of farm policy, the vision of a regenerative agriculture demands the reformulation of foreign policy when it comes to the moral mandate for international development assistance. Pressures for locating and maintaining foreign markets for our agricultural surplus must give way to civilized policies of international development assistance for food-deficit nations in order to develop their own regenerative and self-reliant food

systems...to help them overcome, in their poverty, more than 200 years of colonial history of human and natural resource exploitation and false starts in agriculture for commodity export rather than domestic food supplying.

IV. SUMMARY

Enough for now. I have tried to demonstrate the importance of perspective, historical review, and the necessity of responsible vision as foundational themes of reflection for discussion about the politics of food. In addition, I have tried to point to the importance of agricultural studies in every discipline of every college and university. I have tried to point to the necessity of theological inputs for the building of a global regenerative food system...a system that moves us beyond a petro-chemical and capital intense agricultural cul-de-sac, as well as beyond a 7,000 year history of agricultural resource loss and biospheric stress. I have tried to point to the necessity of vision in a time of crisis.

Tragically, the crisis which we experience on our farms across the United States today is a further chapter in this historical record of the human attempt to feed and clothe itself. The hope that we have is in our faith perspectives, historical memory, vision, and new tools in the biological, economic, and social sciences. Basic to this hope is a fundamental shift in our self-understanding about who we think we are and of how we are to relate to the creation. Ancient biblical theology about these matters has everything to do with building a new food politic.