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Environmental Issues in the 1990 Farm Bill Debate

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Environmental quality has joined global competitiveness as the dominant issue in legislative debate leading up to a new farm bill. Conservation provisions of the 1985 Food Security Act, including conservation compliance, the conservation reserve program (CRP), swampbuster, and sod-buster, have added a new dimension to farm policy. A new set of policy advocates have found a place in the farm policy debate. These advocates are more interested in conservation, environmental, and social issues than with the commercial aspects of agriculture.

Public concern for potential contamination of foods with agricultural chemicals has combined with persistent concerns for soil conservation and water quality in moving environmental concerns to the top of the agricultural policy agenda. Fears related to Alar in apples and cyanide in imported grapes, for example, replaced fears of another drought in summer 1989 news headlines. The Food Market Institute reported that 82 percent of food shoppers responding to a summer 1989 survey believed that chemical residues in foods posed a "serious hazard" to their health (Steimel).

Many farmers are also concerned about their own health and the health of others as evidence mounts about the negative impacts of agricultural chemicals on the environment. Testing of farm wells used for drinking water have shown that a significant number contain at least trace levels of fertilizer and pesticide residues. A recent report by the Agriculture and Law Institute showed that 40 to 56 percent of the 568 farmers surveyed favored restricting fertilizer application in watersheds known to have high risk of water contamination (Institute for Alternative Agriculture).

Even farmers who feel that current farming practices are environmentally sound are concerned about the future of a chemically dependent agriculture. Farmers realize that new weed problems may develop, requiring additional herbicides, after a previous weed problem is under control. Insects and other pests may become immune to given pesticides forcing a

change to new formulations to maintain control. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) has increased the costs of certifying new pesticides. The Act also requires recertification of pesticides now on the market. Thus, future pesticides could be more costly but less effective than those used in the past.

The Question of Sustainability

Much of the current environmental policy debate in agriculture has centered on agricultural sustainability. Research and education projects related to "Low Input Sustainable Agriculture" (LISA) were funded in the last three federal budgets through the agricultural productivity title of the 1985 farm bill. Total funding for the three year period has amounted to less than \$13 million. The LISA program has been the focal point of much of the public debate on agriculture and the environment. Yet LISA funds amount to less than one percent of the total agricultural research budget (Smith).

Low Input Sustainable Agriculture (LISA) is a relatively new term and thus, has no universally accepted definition. LISA embodies two separate concepts: Low input (LI) and sustainable agriculture (SA). These two terms are related but do not mean the same thing.

A definition of sustainable agriculture is still evolving as a product of debate concerning agriculture and the environment. There is a growing consensus that a sustainable agriculture must be made up of farming systems that are capable of maintaining their productivity and usefulness indefinitely. Environmental soundness is only one dimension of overall sustainability. Sustainable systems must be resource conserving, socially supportive and commercially competitive as well as environmentally sound (Ikerd).

Systems which fail to conserve their resource base eventually lose their ability to produce. Systems which fail to protect their environment eventually destroy their reason for existence. Thus, systems must be ecologically sustainable. Farming systems which fail to provide adequate supplies of safe and healthful foods at reasonable costs lose their usefulness or utility to society. And finally, systems that are not commercially competitive will not generate the profits necessary for financial survival of producers. Thus, systems also must be socially and economically sustainable.

There is no conflict between ecologic sustainability and economic sustainability: farming systems must be productive, competitive, and profitable or they cannot be sustained. Also, systems must be ecologically sustainable or they cannot be profitable over time. Even in the short run, there is no conflict between sustainability and profitability from the standpoint of society. Considering all costs and benefits to society over time, social benefits will exceed social costs only for those systems that are also sustainable.

The potential conflict arises between individual producers and society in the short run. Systems that are most profitable for individual farmers may or may not be sustainable. Also, sustainable individual farming systems may or may not be profitable in the short run.

Low-Input Versus Sustainability

The low input or LI part of LISA is associated with farming systems which rely less on externally bought inputs, such as chemical fertilizers and pesticides, and more on internal resources such as land, operator labor and management (Rodale). There is no clear division or point of separation between low input and high input farming systems. Thus, lower input rather than low input might be more appropriate terminology. Systems become lower input if they reduce their reliance on external inputs and increase reliance on internal resources. Higher input systems, on the other hand, rely more on external inputs and less on internal resources.

Lower input systems may or may not be more sustainable than higher input conventional farming systems. Lower input systems tend to be more resource conserving and environmentally sound than conventional systems. For example, lower input systems that use less synthetic chemical pesticides typically represent lower environmental risks than do higher input, chemical intensive systems. There are major reservations and questions about the productivity or ability of lower input systems to support growing populations with safe, healthful, food supplies at reasonable prices. Doubt also exists on their profitability and competitiveness with higher input systems (Ruttan).

Lower input is not an end but rather a means to an end (Shaller). Reducing reliance on external inputs is one strategy for achieving the goal of sustainability. Yet reducing inputs may or may not be an effective means of achieving sustainability. Economic viability and ecological soundness are both necessary, but neither alone is enough to ensure long run sustainability.

The Question of Need for Environmental Policy

There is no need for environmental policies related to agriculture if the current agricultural system in the U.S. is sustainable. Many farmers, commodity groups, and agribusiness firms argue there is no evidence that our current system is not sustainable. They contend that U.S. consumers have the most abundant, healthful, and safe food supply in the world. Also people are leading longer, healthier lives as a result of modern agriculture. Thus, they contend, there is no justification for government policies dealing with agriculture and the environment.

Environmentalists argue that the evidence of environmental degradation, such as chemical residues in water supplies, is conclusive, clearly showing excessive use of synthetic chemicals in farming. Consumer advocates argue that we can't wait for future cancer and other health consequences of consuming chemically contaminated foods before we restrict their use. Conservationists point to the non-renewable nature of soil, fossil fuels, and many water sources as clear justification for social constraints in resource use. These groups contend that delays in addressing the issue of the negative ecological impacts of conventional farming can only add to growing, possible irreversible, risks to people and damage to our environment.

The current policy debate is between those who would continue to emphasize productivity and profitability as a means toward the end of sustainability and those who feel that agricultural sustainability is threatened by current farming practices which waste scarce resources, degrade the environment, and present unacceptable risks to consumers. Neither group is opposed to the goal of sustainability. They differ only about the means of achieving sustainability.

The Nature of Public Policy

The basic objective of agricultural policy should be to ensure that costs and benefits of society are reflected in dollars and cents costs and returns to farmers. Government policies are not needed in cases where free market prices for inputs, resources, and commodities already reflect full social costs and returns. In such cases, farmers will find it in their self interest to do the things that also are in the best interest of society.

In many cases the short run interests of individual farmers may not coincide with the long run social interest. In such cases, government programs may add penalties and subsidies to costs and returns from the market place. When such policies are effective, they will reconcile or offset any differences between the short run interest of individual farmers and the long run interest of society.

Effective government programs are difficult to devise and implement. A program designed to achieve one social objective often becomes an obstacle to achieving another. Government programs that were designed to lessen financial problems of individual farmers, can become significant obstacles to the achievement of current environmental goals for agriculture.

Commodity oriented programs have encouraged farmers to farm fewer acres more intensively and have pressured farmers to produce the same crops year after year. Such strategies are necessary to remain eligible for government commodity loans, deficiency payments, federal crop insurance,

and federal disaster programs. Intensive farming systems rely on chemical inputs rather than crop diversity for pest control and fertility. Thus, they represent a potential threat to ecological sustainability. A first step toward developing an environmentally oriented policy for agriculture is to remove the obstacles presented by current government programs.

The 1990 Environmental Policy Agenda

The environmental agenda for the 1990 farm bill debate was set by various pieces of proposed legislation. Introduced to help consideration, discussion, and debate of various provisions, these bills might appear as individual chapters or sections in a compressive 1990 farm bill.

The Farm Conservation and Water Protection Act (S.970), introduced by Sen. Wyche Fowler, (D-Ga), has received the most attention among the environmental bills introduced thus far. This bill has six separate titles.

Title One would protect farmers who adopt low-input, resource conserving crop rotations from losing their government program base or benefits as a result of underplanting of program crops. Participating farmers would have to plant cover crops on set-aside, or reduced acres, and to establish a multi year set-aside to promote soil and water protection, wildlife habitat, and resource-conserving crop rotations. This title also would incorporate LISA and conservation compliance plans into Farmer's Home Administration Soil and Water and Operating Loan programs. It would prohibit discrimination against farmers using LISA farming systems in coverage and premiums for federal crop insurance. It would also provide modest positive incentives for good stewardship practices, and would encourage farmers to move toward more sustainable farming systems.

Title Two deals with conservation. It would set up a Wetlands Protection and Restoration Program using permanent conservation easements to restore converted wetlands and protect cropped wetlands. The title would also make the current swampbuster provision applicable during the period from conversion to restoration. This title would strengthen the Conservation Reserve Program by increasing its size, increasing incentives for tree planting, establishing eligibility for conservation practices, encouraging sustainable economic uses and providing for permanent easements on CRP land toward the end of a 1995 contract period. It would also provide for permanent easements through a Water Bank Program.

Title Three concerns water protection. This title would establish a drinking water well testing program. In defined areas of water contamination by nitrates or pesticides, the Extension Service, in consultation with other agencies, would provide technical aid in developing groundwater protection plans. In addition, this title would set up a pilot project to retire

government program allotment history and base acres on land with naturally occurring sinkholes.

Title Four focuses on research and extension programs. This title would express the sense of Congress that low input, sustainable agriculture research should be a major institutional budgetary priority. In addition, it would establish a program within the Extension Service to research, demonstrate, validate, and disseminate information on sustainable agriculture.

Title Five would set up a commission to determine the feasibility of a national organic certification program and establish a definition of certified organically grown food. The final title would amend the Farmland Protection Policy Act by producing new safeguards against unwarranted conversion of prime agricultural lands to non-agricultural uses. It would establish a Special Assistant to the Secretary of Agriculture to monitor compliance with this act and to administer this particular program.

The Conservation Enhancement and Improve Act, introduced by Sen. Richard Lugar, (R-Ind), embodies many of the same principles as the Fowler bill. The Lugar bill provides a sense of Congress that base acreage provisions should be revised to provide flexibility in planted crops which would allow farmers to use crop rotations as a means to improve soil conservation and reduce inputs without penalty. This bill would also remove incentives to cultivate CRP land after the contract expires and would extend base protection for five years, if conservation practices are continued. It also has provisions to restore converted wetlands under the CRP program. It would make potential groundwater contamination sites and other environmentally fragile lands eligible for the CRP program.

In addition, the Lugar bill would allow farmers to set aside five percent of their crop base for three years to be devoted to wildlife habitat and soil conservation uses with provisions for government cost sharing. There would be a federal/state annual set aside or paid diversion program to provide wildlife habitat. Producers would manage highly erodible land in a set-aside program under an approved conservation plan. All land entered into the Conservation Reserve Program after enactment of this bill must then meet soil tolerance, or t levels, for farm program eligibility. The Lugar bill would also provide for standardization and legitimization of labeling for organically grown foods. The bill would create a voluntary water well testing program through Extension Service offices with the government paying 50 percent of testing costs.

The Agricultural Nitrogen Education and Management Act, introduced by Sen. David Pryor, (D-Ark), has a much more limited policy agenda than either the Fowler or Lugar bills. It deals only with management practices

in use of fertilizers. The Pryor bill would establish a national education program to promote wise management practices in the use of nitrogen by farmers. It would require a task force report within one year of enactment outlining a set of best management practices to reduce environmental risks associated with the use of nitrogen fertilizers.

Environmental Policy Prospects for 1990

There seems little doubt that the new farm bill will allow farmers flexibility in crop selection without losing their government program base. Emphasis will be on helping crop rotations that conserve soil and reduce reliance on chemical fertilizers and pesticides. The concept of decoupling program benefits from planted acres has now been discussed seriously for several years.

The decoupling concept has support from the administration, from sustainable agriculture groups and from many farmers. The administration's position in current negotiations related to the General Agreements on Tariffs and Trade (GATT) is that all commodity specific (trade distorting) agricultural programs should be dismantled. Sustainable agriculture groups want to remove policy obstacles to crop rotations: other things equal, farmers will choose freedom in planting decisions.

Flexible base has replaced decoupling in the current jargon of policy makers. A flexible base program would allow farmers to maintain program base acres, and payments, without planting the specific crops for which the commodity payments are made. The primary questions about flexibility in the 1990 farm bill concerns the degree of flexibility in their planting choices and the level of payments they will receive as they uncouple their cropping systems from program crops.

An extension of the CRP concept, by one means or another, also seems likely to be a part of the 1990 farm bill. Incentives to return lands now in the CRP program to intensive cropping will be reduced or removed in 1990. Lands that are subject to leachability or present surface water quality risks will probably become eligible for an expanded CRP program.

Publicly funded research and extension programs most likely will be redirected toward sustainable agriculture issues by the 1990 farm bill. Water quality research and education may be the most specific responsibility given the academic and government research community. An effort will be made however, to shift the basic philosophy of the agricultural research agenda to include more conservation and environmental issues.

An extensive water well testing program may be funded to determine the nature and extent of water quality problems associated with agriculture. Beyond that, policies to promote redirection of agricultural research could

range from a sense of Congress supporting more LISA-type research to specific earmarking of a significant percentage of the federal research budget to address specific environmental issues.

More competitive grants to support the development of sustainable farming systems, patterned after the LISA program, seem likely. Farmer involvement, demonstrations, farmer networks and whole-farm systems research probably will be part of the language of any new competitive grant programs.

Farmers will not likely face many specific new restrictions or regulations on pesticide or fertilizer use as a result of the 1990 farm bill. Even testing of water wells will be voluntary. Any action taken to cope with water well contamination or other environmental problems will likely also be voluntary. The toughest environmental regulations for farmers may come from U. S. Environmental Protection Agency on pesticide residues in foods, rather than from the 1990 farm bill.

Efforts will be made to target government program benefits to moderate-sized, family farms to achieve a more socially responsible, sustainable agriculture. Previous programs to limit payments and target benefits to family farms have been largely unsuccessful.

Conclusion

Environmental provisions of the 1990 farm will send a message to farmers that people are concerned about the ecological as well as economic dimensions of agriculture. A public consensus seems to be that people want an agriculture that conserves scarce resources and protects the fragile environment while providing an adequate supply of safe, healthful food at reasonable prices. In return, the public is willing to help in making agriculture competitive and profitable.

In short, the public wants a sustainable agriculture. We are not yet sure just what that implies in terms of changes in farming systems, how such changes should be brought about, or how much sacrifice might be required in the short run to achieve long run sustainability.

No one knows for sure whether or not our current systems of farming are sustainable. However, questions are being raised about such issues as rising input costs, reduced effectiveness of pesticides, water quality risks, food safety, farm worker safety and soil loss, enough to justify a measured policy response.

U.S. Agriculture likely will have another five years of relative freedom in which to address the issue of agricultural sustainability. If experiences on farms, in research plots and in demonstration work shows that more sustainable systems are possible, the 1995 farm bill will be a strong bill

for agricultural sustainability. The extent to which the 1995 bill will rely on incentives, education and voluntary participation rather than restrictions, regulations and penalties may well depend on how seriously and effectively farmers, researchers and educators deal with the issue of sustainability during the next five years.

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