Sustainability Issues: How Should Government Coordinate Farm Regulations and Policy?

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Abstract

Agricultural sustainability is an evolving process ever-seeking a balance between society's economic, environmental and social demands. Governmental policy and regulations while attempting to correct adverse externalities, have at times within themselves created adverse externalities. Failures often lie within the policies themselves, but poor coordination among government agencies is also at fault. This paper outlines a number of coordination issues and attempts to show how the empowerment of communities through ecosystem management is a partial solution to environmental degradation.

Key Words: environmental regulation, government policy, regulation, sustainability, ecosystem management.

In addressing this issue, I first seized upon the contradiction between the term sustainability and the very essence of regulation and government policy. For, it is generally accepted that a truly sustainable system would be a self-contained, enduring entity that is free from all externalities, including government policies and regulations. Therefore, before I begin to address this broad topic of coordination of governmental policies, regulations, and agencies, I would like to first discuss the sustainability concept and illustrate how governmental policies and regulations can foster or hinder long-term agricultural sustainability.

Sustainable Agriculture

Traditionally, one would view a sustainable agricultural system as one that is economically viable, environmentally sound, and socially acceptable. It would be based upon the natural ecosystem and would be non-resource extractive. In theory, it would be designed to be free from adverse rural and non-rural social impacts while providing an adequate amount of food and fiber for an ever increasing world population. (1990 Farm Bill) Beginning with the Agricultural Adjustment Act (Triple A Act) of 1933, we as a society must have felt that the American agricultural system as it exists is not sustainable and have legislated numerous laws in an attempt to make it such. Sixty years ago when we enjoyed an abundance of natural resources, policies of the Triple A Act and similar legislation promoted the industrialization of agriculture as a way to lower food cost, release excess labor from the farm, bring price stability to farmers and consumers, and feed a growing U.S. population. Agriculture has succeeded well in meeting these objectives. However, after years of agricultural surpluses at the expense of resource extraction and exploitation, we have finally begun to address our environmental concerns. And only now are we beginning to look at the social repercussions of our agricultural policies as well. In the path of our industrial agriculture is a crumbling rural

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society, drained of its social infrastructure and lacking in health services, education, housing, shopping, rural leadership, and overall quality of life. Out-migration from agriculture has not only impacted our rural areas but our urban areas as well as millions of farm workers relocated to the inner cities and faced high unemployment, overcrowding, crime, and poverty. Many of these problems linger into the 21st century.

Government policies, either regulatory or incentive based, have the designed purpose to bring forth a more sustainable society. However, these policies have often been short-sighted, and in themselves, have created adverse externalities. Therefore, the question is not on determining the types, levels, and coordination of governmental regulation that will result in a sustainable agricultural system, but rather to the types, levels, and coordination of government policy that may move us toward a more sustainable agricultural system.

None of us will likely witness a truly sustainable agricultural system. Sustainability is an adjustment process. Therefore, agricultural policies and regulations will be needed to tip the balance between food production, resource extraction, and social needs as we move from one generation to the next.

There are several criteria that must be met to move agriculture toward true sustainability. One, it must be income driven. Profitability promotes production while providing capital to correct environmental externalities, support the rural infrastructure, and provide for the overall quality of life needed to encourage farmer participants. Secondly, society must accept responsibility for funding the majority of the research, education, and Extension programs that allow U.S. agriculture to feed an ever increasing population with the same limited resources. Funding is also essential in providing technology to protect threatened resources from unwanted exploitation. Lastly, the distribution of wealth in agriculture must be such that competitive forces drive the markets.

Governmental Policies and Regulations

Obviously, it will require an unprecedented array of coordinated efforts of agricultural policies and regulations to move us toward a more sustainable agriculture and society as a whole. Indeed, the policy arena as it exist today is almost incomprehensible. Farmers deal with price support programs, income enhancement programs, conservation programs, disaster relief programs, crop insurance, health inspectors, state environmental regulation, financial programs, and patent and contract laws. They are supported through research, education and technical expertise from the land-grant experiment stations, the Extension services, State Departments of Agriculture, the Soil Conservation Service, vocational agricultural programs, non land-grant colleges and universities, private agencies and foundations, and the U.S. Forest Service. Within the USDA alone there are forty-three separate agencies. This number is to be reduced to a mere thirty separate agencies under the proposed reorganization. (Team USDA)

Today, American farmers also face the new realization that their lives may be more impacted by policies and regulations outside the traditional Farm Bills. Such is the case with the Coastal Zone Act, the upcoming reauthorization of the Clean Water Act, pesticide regulations through FDA and EPA, toxic waste regulations, water quality regulations from state environmental agencies, labor laws, OSHA, the IRS, and the now famous NAFTA and GATT treaties. Obviously, under these conditions, coordinated efforts are needed to prevent well-intended programs from creating greater adverse externalities than the problems they seek to solve.

Ideally, all programs, policies, and regulations affecting agriculture should be coordinated but will likely escape that mandate. However, there are areas where coordination efforts are successful. One in which I have a special interest and is also in the interest of TVA are Environmental and Conservation programs, especially those that impact water quality. Therefore, I would like to turn attention to some rather exciting developments with interagency coordination on the water quality front to see if these efforts provide insight into much broader applications.

Water Quality Programs

Water Quality programs lend themselves well to coordinated efforts and agriculture will be the primary player in this arena. Non-point pollution is our number one water quality problem, and agriculture accounts for about two-thirds of all non-point pollutants. Agricultural pollutants impacting water quality, both surface and groundwater, include soil erosion, animal waste, pesticides, and excess nutrients which include nitrates and phosphates. EPA estimates that 54% of all lakes and reservoirs and 47% of all streams and rivers are impaired or threatened. The Tennessee River system is a prime example of the impacts of non-point pollution on water quality. TVA estimates that portions of 25 of the 33 largest TVA reservoirs suffer some type of impairment or water quality concern. (TVA) In addition, about two-thirds of the seven million Tennessee Valley residents and 95% of the Valley rural residents rely on groundwater for drinking water supplies making ground water contamination a major concern (Land & Water 201). A Land and Water 201 commissioned study indicates that improvements in water quality to acceptable levels within the Tennessee Valley would result in offside benefits of $551 million annually for recreation-related uses, aesthetic and other intrinsic values, and cost saving associated with water treatment and public health benefits. (RCG/ Hagler, Bailly, Inc.) Therefore, TVA, in cooperation with numerous state and federal agencies, is focusing its resources and those of other agencies on the Valley's water quality problems.

Primary players in the water quality arena include the farmers, USDA, EPA, State Environmental Agencies, U.S. Geological Survey, the U.S. Forest Service, and numerous private, non-profit organizations such as the Nature Conservancy. Farmers, of course, control most of the private lands and therefore have the primary role in private land use while the U.S. Forest Service, Department of the Interior, Department of Defense, TVA and other state and federal agencies have major control over the public lands. Other agencies have supporting roles. The Soil Conservation Service provides technical assistance to farmers and communities while the Agricultural Stabilization and Conservation Service administers cost-share programs. The Environmental Protection Agency executes the will of environmental legislation including the Clean Water Act and also provides 319 funds to address nonpoint problems. Most of these funds are administered through the various state environmental agencies. Extension and the universities are involved through education, research, and technology transfer.

Currently, each agency fulfills its role as assigned under the different pieces of water quality legislation. Coordination generally falls within those projects that are mutually beneficial to all parties involved and most are centered on specific resource use. Information sharing sessions and targeted programs are the typical means by which to coordinate these activities.

Ecosystem Management

Future water quality management, however, will likely fall under a holistic process called Ecosystem Management. This new approach, which has been heavily endorsed by the U.S. Forest Service and just recently by the Soil Conservation Service, focuses on managing the natural systems and the processes that sustain those systems. This science-based approach to the management of natural resources acknowledges that ecosystems are interrelated ecological, social, and economic systems. It recognizes human activity as a part of the ecosystem and stresses the interaction between biological communities, the environment and society and closely approaches the ideals of sustainability. Ecosystem management is a multi-disciplinary approach that fits the resource goals and mandates of legislation such as the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, the Food and Agricultural Conservation and Trade Act, the Coastal Zone Management Act, and the Watershed Protection and Flood Prevention Act.

The ability to address systems within systems provides the opportunity to design ecosystem management plans defined by hydrologic boundaries or watersheds. In doing so, it provides a means to determine the condition of the ecosystem, develop a plan, deliver technical and financial assistance, implement change, and monitor results.

Once watersheds are targeted, an ecosystem management plan can be developed indicating a set of Best Management Practices (BMP's) for all landholders. This plan would include improvements in nutrient management, pesticide management, surface water quality, endangered and threatened species habitat protection, management and storage of surface waters, water conservation, dredge and fill activities, economic impacts, economic growth, and preservation of cultural resources such as archeological sites. Monitoring, targeting and planning can be followed by cost-share, technical assistance, and cost-share demonstrations. Educational programs, the media, and other public awareness schemes may be used to disseminate information to farmers and the general public. Eventually, a limited number of non-compliers may be targeted for failing to meet regulations and be subject to appropriate fines and penalties.

Education will be the key to addressing non-point problems due to the enormous cost of non-point abatement. Demonstrations of the best available technologies and management systems will be the primary tool used in the farmer-to-farmer education process. For example, to address the educational component of TVA's water quality initiative, we are bringing the primary agencies together in an attempt to coordinate the demonstration activity within watersheds for selected states. Technologies and management systems that have the potential to be sustainable and rapidly adopted by farmers are identified. Competent demonstrators are selected and cost-share funds and technical assistance are provided to these demonstrators to lessen the risk of adoption and shorten the learning curve for the technology. These demonstrations can be used by all agencies involved to benefit their own program objectives.

Ecosystem management on a watershed basis will demand coordinated efforts of numerous agencies, farmers, and other groups. Farmers will be an integral part of this process since they are the primary managers of the habitat and the source of most major non-point pollutants. Memorandums of Understanding and Memorandums of Agreement will be the vehicle that coordinates activities, targets cost-share funds, and ensures that technical assistance is available.

Final Comments

While there is no one answer on the most effective way to coordinate farm regulations and policies, there are a few central themes that should be incorporated. Osborne and Gaebler in their famous book, "Reinventing Government", foresees the need to empower communities rather than simply serve them and that a government should serve as a catalyst and steer rather than row. We have found over the years within TVA that partnership arrangements based upon technical assistance, cost-sharing, and information sharing are the best means available to coordinate our activities. Cooperation, coordination, and empowerment will be an integral part of the ecosystem management approach to environmental improvement.

So, if we go back to the issue at hand, "How should the government coordinate farm regulation and policy?", perhaps, the best answer is that it should not. Responsibility for coordination should lie within the local communities. The days of "one size fits all" governmental policy are doomed for failure. Instead, Government should put into place programs that move communities into action. From there, the government should ensure that all parties are represented, sufficient information is available for communities to make decisions, and then provide the technical expertise and financial assistance needed to begin the process.

Coordinated efforts at the local level should move agriculture one step closer to true sustainability. And we, as Agricultural Economist, should face up to our new responsibilities as we decentralize governmental policy and use our expertise in policy decisions outside the beltway.

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