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Alternatives for Small Farm Survival: Government Policies Versus the Free Market: Discussion

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The topic of the relationship between sustainability and farm structure, including the role of government, is extremely timely. It is so timely, in fact, that economists have significantly more questions about these relationships than we do answers. Farm policy, with its emphasis on commodity production, is clearly at a turning point; perhaps this is the most critical time since the basic policies were established some 60 years ago. The Tweeten and Amponsah paper makes a contribution to our understanding of this sea of change in the policy arena and the likely impacts on small farms.

Sustainability is often viewed as having three dimensions: economic, environmental, and social. It could be argued that the greatest justification for government involvement exists in the environmental area. Markets should guide the economic choices, and the role of government in providing strong social direction is controversial. On the other hand, strong private markets do not exist, by definition, in the environmental arena—and public opinion polls have consistently shown that the public is concerned about environmental quality.

Small Farms and Profitability

Tweeten and Amponsah appropriately define small farms as those with gross sales of $100,000 or less. Small farms generally do have higher per unit of output costs, and small farms generally lose money from farming (Ahearn, Whittaker, and El-Osta; Ahearn, Perry, and El-Osta). So, the economics of small farm production is relatively clear. Most small farm households make their living by combining farm and off-farm work activities.

What is much less clear is the economics of alternative practices, regardless of farm size. Getting these cost estimates right is key to understanding the farmer adoption of alternative practices, as well as the key to the proper role for government action. The obvious first step in understanding the economics of alternative practices is to define them. This is primarily a challenge for physical scientists, although a task that is best tackled in a multidisciplinary team to ensure usefulness in future economic analysis. The second challenge in determining the economics of alternative practices is to identify the paid and unpaid inputs involved. Often times, alternative practices are more management and information intensive than conventional practices. Therefore, they require higher costs in the form of opportunity costs of the operator's (or others') time. Accounting of unpaid hours worked is always difficult, even for conventional practices.

Small Farms and "Green" Practices

In contrast to the economic issues, there is much less agreement about the relationship between farm size and environmental degradation. For example, another paper in this session argues strongly that small farms adopt more environmentally sustainable practices, while the Tweeten and Amponsah paper argues, albeit more mildly, that large farms are often better environmental stewards. The vari-

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ety of opinions among agricultural experts and the general public on this question is striking, and results from the lack of a sufficient body of compelling evidence.

There are two major reasons for the lack of evidence. First, there is not clear information about how technologies that are purported to be "green"—i.e., to reduce environmental degradation relative to conventional practices—actually do affect the environment. For example, some in the set of practices that fall under the integrated pest management (IPM) category may or may not lead to reduced chemical use (Norton and Mullen). Again, the literature is mixed for individual practices, but for the most commonly agreed upon component of IPM, scouting, strong evidence exists about its relationship to chemical use. Most empirical evidence indicates that increased use of scouting leads to increased chemical use.

Using this example, it is easy to understand why confusion exists among both experts and lay persons. If we label the technology as environmentally friendly and then examine the distribution of adoption by farm size, we get one view, since larger farms are more likely to scout. But, if we first examine how that practice relates to chemical use, we are left with an opposite view of how farm size relates to sustainability. And this example has avoided the most complex of all scientific issues. We are not so much interested in how many pounds of chemicals are applied, but in how much environmental and human health risk is associated with the chemicals applied. For example, how does the variation in the resource base, such as soil characteristics, affect the environmental risk associated with the dispersion of chemicals?

Obviously, a multidisciplinary approach is called for here. The additional lesson is the danger in tracking a single practice as indicative of the adoption of a whole collection of interrelated practices. Analogous issues could be raised for the developing set of technologies labeled precision farming.

The second reason for the lack of strong evidence about the relationship between farm size and environmentally relevant practices is the lack of an adequate farm-level data set. While the U.S. Department of Agriculture (USDA) has developed a national-level data set on farm structure and farm economics, no such data base exists that links farm structure and farm input use and practices. However, for the past year, the USDA has been designing a national data base that includes information on farm structure, economics, and environmentally relevant variables such as input use and practices. The first data will be available in late 1997.

A final set of questions relating to the relationship between farm size and environmental sustainability is macro in nature. If all farms were small, environmentally-friendly operations, would they be able to meet the demands for food? Or, would it mean that it would be necessary to put more land in production, thereby increasing the environmental degradation in a macro sense?

Small Farms and Social Sustainability

Rarely asked is the question: Are small farms more socially desirable than very large, concentrated production units? It is taken for granted that they are. There are good reasons for this. The survey referenced by Tweeten and Amponsah found 80% of Americans believed the family farm (taken here to mean not large corporate operations) should be preserved. Aside from the emotional ties, there is a critically important economic reason for this preservation—namely, rural economic development. Many small farms contribute more to the economic activity in local rural areas than fewer large farms, thereby stimulating the economy (Carlin and Saupe). On the other hand, if the choice is between a structure dominated by large farms and one that is nonexistent (e.g., as a result of economic forces), local leaders would likely choose in favor of the large farm structure.

Perhaps a more critical question here is, again, a macro question—and a complex macro question at that. How much does society value the higher personal and community quality of life and social stability that a small farm structure provides, relative to a large farm structure? These are the types of considerations that are being raised when some policymakers and small farm advocates speak in favor of government intervention to curtail the movement toward greater concentration in production. In addition, a positive externality from a small farm structure is the scenic value of the rural landscape. Europeans have recognized this value explicitly for

some time, even to the point of arguing that preserving these landscapes is cause for subsidization of the status quo.

The Government's Role

Tweeten and Amponsah pose the question: "[Are] commodity programs being phased out because policymakers no longer give priority to preserving small family farms or because policymakers have realized that commodity programs were ineffective in preserving small farms?" This is a misleading question. It implies that policymakers of the past have made small farm preservation a high priority. It is true that the preambles to numerous pieces of legislation include language about preserving family farms—not small farms—but there is no significant feature of the commodity programs which offers specialized support to small farms. Even programs directed at sustainability issues, regardless of farm size (e.g., the Integrated Crop Management Program), have made relatively small contributions compared to the investments taxpayers have made in the traditional commodity programs over time.

Under the 1990 Farm Bill, payments were based on output levels—not exactly an advantage to small farms. Although there is a $50,000 payment limit in effect, the three-entity rule allowed for an effective limit of $250,000. There have also been proposals, both in the past Republican and in the current Democratic administrations, to exclude payments to individuals earning more than $100,000 in off-farm income. Even that proposal, which results in very modest budget savings and affects only a handful of mostly large farm program beneficiaries, has yet to be successfully translated into law. The authors did make a strong case for their assertion that revamping the commodity programs in order to preserve small farms is not a viable strategy, given that programs are being phased down.

During the 1995–96 farm bill debates, it was interesting to note that among economists there was a great deal of discussion about the potential for "green payment" schemes that encourage environmental stewardship in some form. However, much of the formal discussion in Congress was limited to the simple theme of less government involvement in agriculture. It has often been argued that the traditional commodity programs have, in fact, encouraged increased concentration in the sector, as well as encouraged reliance on practices that are not environmentally friendly, such as practices leading to greater erosion or use of chemicals. If the programs are in fact phased out, will the rate of concentration in the sector slow down? Will the use of greener practices increase? Or will the increased competition resulting from the decrease in government involvement provide incentives to degrade the environment in order to stay in business?

Tweeten and Amponsah make a good case against the state-by-state regulation of industrial agriculture. The issues are exactly parallel to state policies for other industries. Industries will locate where the local and state governments offer them the best economic package, and thereby begin to bid against each other. Avoiding this intergovernmental bidding requires that any industrial policy must be national in scope. The authors say very little, however, about environmental regulation. This may become the greatest source of government intervention in agriculture, and one for which we know little of the likely scale effects.

The publicly subsidized research of the USDA/Land Grant University System has often been criticized for accelerating the pace of production concentration. Tweeten and Amponsah offer examples where the system can provide useful services to the small farm community. In fact, given the service that the Southern "1890s" institutions have provided to Black limited-resource farmers for an extended period of time, these schools may have some important lessons to share with "1862" institutions which are interested in addressing some of the needs of small farmers.

The USDA/Land Grant University System probably has never been more receptive to new ideas from external customers about the research and extension agenda. For example, the three separate advisory boards will be continued under the National Agricultural Research, Extension, Education, and Economics Advisory Board. The environment is supportive, but how much the funding for research and extension will follow along on new paths remains to be seen. For example, the Agricultural Research Service (ARS) estimates that only 21 projects out of its total 1,177 could be classified as sustainable agricultural projects—approxi-

mately 1% of its total research budget. Taking a more liberal view of the contributions of its research program, nearly one-third of the ARS budget could be viewed as contributing significantly to sustainability goals (Vasavada).

Conclusions

Farm structure considerations are largely policy afterthoughts, although thoughts that have often generated more discussion than the supply management and income enhancement goals of the policies themselves. Bringing structure issues to bear on sustainability issues is the current manifestation of that debate. The debate, and the papers in this session, beg several research questions:

- What practices are environmentally friendly?
- Are small farmers more likely to adopt these practices? and especially, what are the private costs of these practices?
- What economic incentives or educational information will farmers of all sizes require to adopt these practices in the absence of regulation? and what level of subsidization is society willing to pay?
- If small farms are not economically viable, is society willing to subsidize them?
- What is the responsibility of the research and extension agenda of the USDA/Land Grant University System in the area of small farm sustainability?

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