

Agricultural Outlook Forum

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## HOW SMALL FARMS COMPETE

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### Introduction and Background

Good afternoon. I appreciate the opportunity to be here and to be part of this panel. I only have 20 minutes, so I will not be able to fully outline all of the thoughts and ideas presented in this talk. However, I will be happy to provide the background for material I present.

I was asked to participate because of testimony that I presented to the Small Farms Commission when it met in Sioux Falls. I have copies of that testimony for anyone who is interested. Much of my talk today will be drawn from the testimony that I gave there.

Before beginning I would like to present briefly the general ideas that I bring to my analysis of how small farms compete. I come from the Midwest so my examples and frame of reference will be from that part of the country. I was trained as an agricultural economist in the land grant tradition. I believe that everything is interconnected and that every choice we make involves trade-offs. I also believe that change is inevitable but that we can influence the direction of change. We are masters of our own destiny.

I believe that success involves at least three four-letter words that end in k: hard work, taking risk, and luck. Everyone should have the right to try, but none of us has the innate right to succeed. We should have opportunities but not guarantees.

There are four points that I emphasized before the commission. First, size and efficiency (as measured by cost of production) are not the same thing. My studies of data from the Iowa Farm Business Association lead me to conclude that for row crops the low point on the average cost curve is somewhere between 400 and 600 row crop acres. In swine production, the low point is approximately 1000 head marketed.

Agricultural enterprises exhibit what is called an L-shaped average cost curve. There are initial economies of size but these are captured sooner than most people realize. Farms are not getting bigger to lower cost of production. Most of the farmers I talked to agree that low-cost production can be achieved without large volumes of production. Their concern is access to markets.

A second point I made before the commission is that we do not know the extent, nature, or impact of multi-family farms. The Leopold Center for Sustainable Agriculture funded a phone survey of Iowa farmers during February and March of 1997. This survey found that 16 percent of the farms had more than one family involved in their management. Nineteen percent of the farms reported being involved with another operation and that “other” operation for over 80 percent was a family member. Additionally, 14 percent of the farms reported receiving regular help; in over 90 percent of the cases it was help from a family member.

The concerns over small farms, family farms, and beginning farmers reflect uneasiness over the structure of agriculture. Currently the Census of Agriculture is the only measure available regarding the structure of production agriculture. The Census has been criticized for using \$1000 in sales as the limit for classification as a farm. Such criticism misses the point that multi-family operations are not even being considered. For example, one of my former student employees returned to the family farm where there are three siblings and the parents farming. Each of the siblings has enough sales on their own to classify as a farm but they all work for the home farm. The Census would count this as four farms; one large, owned by an older farmer, and three smaller farms run by younger people. This is one way to look at the situation but if family ownership is the issue then the question becomes: is this four farms or one? We don't have a good way to measure these types of arrangements.

The third point, which shows I have a firm grasp on the obvious, is that agriculture has become capital-intensive with increasingly tight margins. This is illustrated by examining net farm income in Iowa as a percent of the gross farm income. The chart shows farm income both with and without the government programs. In the 1950s, net averaged 35 percent of the gross while over the last decade net has averaged between 10 and 20 percent depending on whether or not the government program payments are included. This means an Iowa farm has to produce two to three times the volume of the 1950s just to have the same level of income. This does not even account for the changes in farm lifestyle, especially among the children.

These three points lead to the fourth observation. Farms are getting bigger because they can. Growth is a goal because they need to expand in order to generate an adequate income, and because they are making room for more than one generation or family. It is important to keep these points in mind as we think about and discuss farm size and the structure of agriculture.

### **How Small Farms Compete**

Small farms compete the same way that any farm competes; by having a farming system that is consistent with the goals and resources available.

Any farm operation has to consider three important items when deciding on the type of farming system to employ. First, it is important to know the goals and objectives of the farm family. Underlying the goals and objectives are the values held by the decision-makers and the family.

The goals and objectives provide a road map for decision-making and for assessing the success or failure of the operation and the desirability of alternatives available. The goals and objectives occur at various levels. There should be daily, short- and longer-term goals and objectives. I won't spend any time defining or debating these terms. The point is that you need to know where you want to be before deciding which way to go.

The second thing necessary for any successful farm is to know the resources that are available. These resources can be classified in a variety of ways. One classification that is especially useful when evaluating small farms is knowing the resources that are internal and external to the farms. The second classification is the familiar economic analysis division among land, labor, capital, and management. For example, the internal land would be owned land whereas the external would be land available for rent. Similarly, the farm has owned equity or borrowed capital available and on-farm labor versus hired labor.

We don't have time to go into a complete description of the resources and the various categorizations available. Suffice to say that each farm has a unique set of resources and that the way to compete is to farm based on the resources that are available. It is also important to note that the resources available to the farm will change over time. Therefore, the optimum farming system and the mix of resources will also change over time. A beginning farmer has labor and hopefully good management but little capital. Over time this will change to having less labor available (or desired) and more capital.

The switch to a more capital-intensive agriculture has removed much of the need for labor. As we continue to adopt technologies and systems that require less labor, we will inevitably have fewer, larger farms. As a society we are faced with the choice of continuing to pursue the capital-intensive course or a course that would allow more management-intensive strategies to be profitable. This is a point to which we will return shortly.

The third action that any farm needs to take is to carefully evaluate the options and alternatives that are available. Every farm, no matter what size, has options. We may not like them but there are always options. The most important thing is to utilize those options that are consistent with the goals and resources that are available. This could include either part- or full-time off-farm employment.

When considering options it is important to remember to make choices that will allow the most flexibility for future decisions. It is also important not to get lost in the forest because of the trees. There are so many options available and new technologies seem to be arriving at an increasing rate. Farm operators need to decide on a course and then proceed.

The decision-making steps for small farms are no different than for large farms. Small farms have a different mix of resources available but the correct decisions are still the ones that are consistent with the goals and the resources available.

## Small Farm Options

The most important thing for small farms to remember is not to choose the same path or mix of resources as those used by large farms. Small farms have to focus on appropriate technology. I first heard this term used by a man named E.F. Schumacher in the 1970s book entitled, "Small is Beautiful." He argued that to be successful farmers needed to adopt the technologies that were appropriate for their mix of resources. The idea still holds true today in spite of the intervening technological innovations.

Small farms should try to capitalize on their unique attributes. Every farm, large or small, has a unique set of resources. Small farms have the ability to be more flexible than large farms. I feel that this flexibility will offer a significant advantage in the future. Consumers are becoming more demanding with respect to quality and other non-price attributes. The new identity-preserved crops offer some alternatives where it could be easier for smaller farmers to capture the added value to maintaining segregated products.

There are several examples of specific technologies or farming options available to small farms. One example is hoop houses for swine. The hoop houses are a relatively cheap alternative that relies on natural ventilation and requires a different type of management than confinement systems. A recent comparison by the Midwest Plan Service estimated that the cost per pig space for a confinement unit would be approximately \$160 compared to a \$50 cost for hoops. The estimated difference in total cost of production is less than 1 percent.

The MWPS study shows very clearly the differences that exist with different technologies. The confinement system requires only .25 hours per pig whereas the hoops are estimated to require .4 hours. If capital is the constraint, a farmer will earn more with hoops than with a confinement, but if labor is the constraint then confinement is more profitable. The two systems also illustrate the difference between the quantity and quality of labor. In the confinement there is less total labor but the labor is spent more on the mechanical aspects of production while the hoop labor devotes more time to animal husbandry.

A complete discussion of the differences between hoops and confinement on risk, the environment, and so forth is beyond the scope of this talk. However, it is interesting to note that at least in Iowa, the farmers are ahead of the research community in understanding the problems involved with hoops and possible solutions.

Another example of a management-intensive farming option is found in the work of the Weed Management Issue team funded by the Leopold Center. This group is trying to identify alternative weed management techniques and weed population predictors that can be used in a total farm management system. They are truly looking for ways to better understand weeds rather than kill them. This is very much in line with the thinking of Aldo Leopold who considered "a weed as simply a plant out of place."

Increasing our understanding of weeds and their impact will increase the options and alternatives that are available. This is in direct contrast to the current trends in weed management for soybeans in Iowa. In 1989, 84 percent of the soybean acres in Iowa were cultivated at least once. In 1996, the percentage of soybean acres row-cultivated dropped to less than half (48 percent). At the same time, herbicide costs per acre increased by over two-thirds.

I asked some farmers who work with me why they thought that trend was occurring. Everyone mentioned time, in addition to the obvious move toward drilled soybean or narrow row systems. One commented that he had a late model cultivator with an electronic guidance system that was available if he ever needed or wanted to cultivate. The issue was he never wanted to cultivate. In 1997, he cultivated only 25 of his over 2000 acres of corn and soybeans. He said he knew his herbicide costs were high but his time was worth more than the difference. He is an established farmer, and his analysis would be different if he was just starting out or farming part-time.

Another research area leading to more management-intensive systems is the work in grazing options. This work can be categorized as intensive or rotational but is intended to identify and evaluate strategies. The idea is to make optimal use of pasture resources. Advances in fencing allow quicker, more convenient separation of pastures. Animals are given just a few days in one pasture area and then moved to a new area with fresh grass. I have seen how after just a few days the animals know when they are going to be moved and why. Herding is much easier and the profitability has been demonstrated.

The two areas mentioned in weed and pasture management are just a part of the efforts to integrate all of the decisions. Integrated crop management and integrated farm management are general terms given to this work of trying to identify options. Soil testing, nitrogen management, seed selection, and so forth are all a part of the identification and evaluation of alternatives.

A final example of small farm options is the work linking conservation activities on the land and in the production process with environmental outcomes more favorable than the current ones. Regardless of the specific area, there are many more examples of work with potential for small farms.

### **Recommendations to the Commission**

Although risking going over my time, I would still like to briefly present my recommendations to the commission.

All USDA-funded studies should be evaluated for their impact on size. Different technologies benefit different sizes of farms. In the recent Rural Life Poll in Iowa, farmers were asked who they thought would benefit from 10 new technologies. On the average only 2 percent felt small farms would benefit, 7 percent said medium-sized farms, 28 percent large farms, 31 percent all farms, 21 percent said agribusiness, and 11 percent said consumers. If we are truly interested in small farms, then we should be pursuing technologies and systems to benefit them.

We need to keep the distinction between public and private research clearly in mind. I have given a paper on this and it is one of the important dichotomies to remember. Private research is for private gain. Companies are in business to make money. They should exhibit a social conscience and as consumers we should support them, but in the final analysis a company has to make money to stay in business. Public institutions and organizations should have complementary but different objectives. A paper by Wally Huffman and Richard Just made the distinction that private research should be in the topic areas to make money while public research should be in the areas of pre-technology, social issues, food safety, environmental quality and so forth.

We must continue to examine a whole array of options. Every farm is unique and the more options that are available, the greater the chance for choosing successful ones. The options must be structured to build on the strengths of small farms. At the very least the work should be size-neutral.

It is important to not confuse wanting to feed the world with wanting the world to be fed. Many people talk about the need to feed the world but I submit that the ones in the world who need to be fed cannot pay for what we have to offer. We are seeking exports to help with the balance of payments and to make money, but that is different than the egalitarian notion of wanting the world to be fed. Problems of hunger and poverty are complex and beyond the current discussion but the argument that we need to continue along the path that is getting rid of farmers so that the world can be fed is without merit.

We need to keep in mind that agricultural policy covers more than production. How a society feeds itself and utilizes its natural resources determines how long it will survive. Agriculture involves both the production and the culture. Environmental quality, quality of life in rural communities, and quality of food are just part of the concerns for agricultural policy makers.

There needs to be better information on the extent and nature of family farms in agricultural production. But it is more important to get better information on the extent, nature, and consequences of the concentration all along the food chain from the field to the table.

Finally, I think it is very important not to merely start a new program for small farms. Size considerations and social responsibility needs to be built into all USDA programs.

## **Conclusion**

The trend toward larger farms and the trend toward a more capital-intensive production system are different perspectives on the same phenomena. As we have progressed as a nation we have stressed increasing specialization, size, growth, and so forth in all businesses. We are disappointed if the business or economy does not grow. But how are we growing and what are we growing into?

The trend is not inevitable, but change is. The questions we choose to ask and the research we choose to fund all determine the direction in which we will go. It is a question of our approach and attitude. Are we going to continue to view nature as the enemy to be conquered or are we going to start viewing ourselves as coinhabitants?

Society has to decide on the goals and objectives for agricultural policies. Simply making the most money in the short run or having the cheapest out-of-pocket food possible are goals that can lead to trouble.

Small farms can compete but not if they try to act like big farms. They must rely on finesse, not on volume. Research needs to be directed at evaluating and identifying options concentrating on the small farm strengths. We need to conduct research in the direction we want to be heading.

Thank you for your time and attention.