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Evolution of Cooperative Thought, Theory and Purpose: *Reaction*

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I would like to thank Torgerson, Reynolds and Gray for their excellent historical presentation, in this publication, on cooperative thought, theory and purpose. This provides an excellent starting base for the conference and, as they say in their paper, "in reviewing the evolution of important ideas, it is important to not lose sight of the historical context and of developments in cooperative practice." In addition, this paper will be a valuable reference for all of us as we continue with future cooperative and agribusiness research and teaching.

My comments today will highlight many of the points made by Torgerson, Reynolds and Gray in light of two questions: "Where are things going from here for cooperatives?" and "What is the role of cooperatives in the changing food industry?"

I will explore five general topics. To put the issue of the changing food industry into perspective I will highlight some of the changes, which are also referred to as the industrialization of agriculture. From there I will explore the question of whether the future of agricultural cooperatives involves demise or success. I will summarize many of the points that have been made by Cook; Fulton; and Torgerson, Reynolds and Gray.

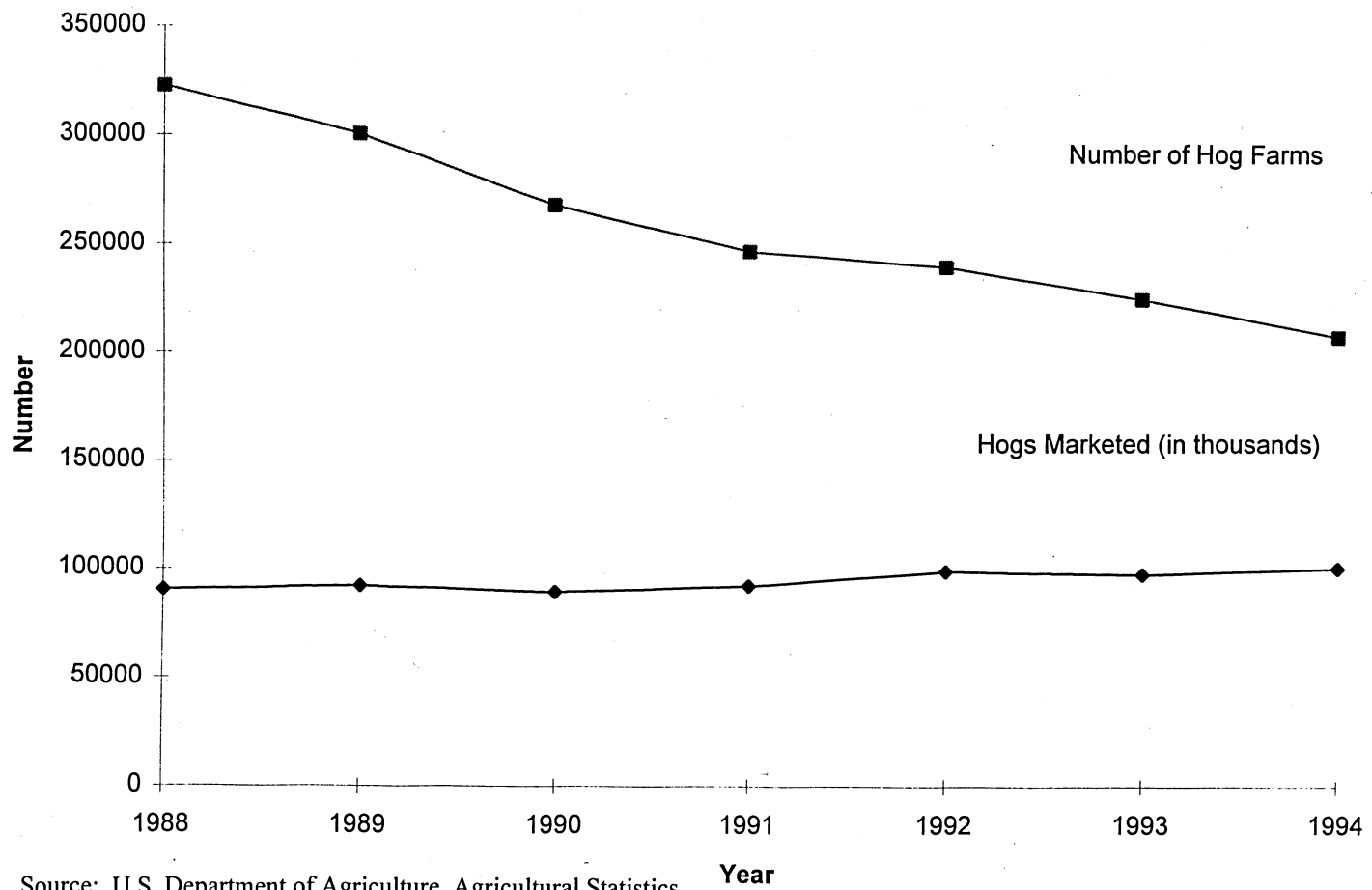
The third topic I will consider is the challenges and issues facing cooperatives today and in the future. In light of the challenges facing the cooperative sector, I will explore future research directions and then close with some concluding remarks.

Industrialization of Agriculture

The changes currently taking place in the food and agricultural system are occurring rapidly and, in general, are resulting in increased consolidation of the production and processing of agricultural and food products. Statistics from virtually every sector of agricultural and food production will illustrate this increased consolidation. However, the hog industry represents a sector in which the changes are some of the most rapid. Figure 1 illustrates the number of hog farms and the number of hogs marketed in the United States each year from 1988 through 1994. During that seven-year period the number of hogs marketed annually increased from 90,476,000 to 100,709,000 or 11 percent. In contrast, the number of hog farms in the nation declined from 322,600 to 182,700 or 43 percent (U.S. Department of Agriculture).

Boehlje defines the industrialization of agriculture as "the application of modern industrial manufacturing, production, procurement, distribution and coordination concepts to the food and industrial product chain" (Boehlje). He goes on to categorize the consequences of the industrialization of agriculture into seven categories: 1) a manufacturing mentality, 2) a systems approach, 3) separation and realignment, 4) negotiated coordination, 5) risk, 6) power and control, and 7) information.

Figure 1. Number of Hog Farms and Hogs Marketed in the United States



Source: U.S. Department of Agriculture, Agricultural Statistics

The manufacturing mentality represents a major paradigm shift from a mentality of producing and then selling an agricultural commodity to that of manufacturing a food product with characteristics consumers have identified as important. Other implications of the manufacturing mentality include systemization, specialization, and scheduling and utilization of production and processing capacity. The manufacturing mentality moves the production of food products from a stage focus to a systems approach. This change of focus reduces sub-optimization at specific stages, eliminates deadweight losses and focuses on total cost rather than cost at a particular stage. With a systems approach, the matching of various inputs to optimize the characteristics of the output will be more prevalent.

The industrialization of agriculture is resulting in separation of various stages of production by both geography and activity to take advantage of resource specialization and size economies. This separation of production stages is happening concurrently with a relinking of stages by alliances and partnering. The increased use of alliances and partnering leads to the importance of negotiated coordination. Negotiated coordination replaces the impersonal spot markets in which agricultural commodities have traditionally been traded. A major advantage of negotiated coordination is increased information flow that results in more rapid adaptation in the production process to ensure the quality and characteristics of the product desired.

The industrialization of agriculture and the changes associated with it have changed the nature of risk associated with the production and distribution of agricultural and food products. In many cases, price risk has been reduced with increased use of contracting and negotiated coordination. However, there is increased risk with respect to quantity and quality features and

food safety and health risk. In addition, with increased use of alliances and partnerships, relationship risk is a factor that often did not exist before.

Boehlje argues that as the production of agricultural and food products becomes more industrialized, there will be a shifting of control and the associated power. In particular, he suggests that the important points of control, and therefore power, lie with those in the market place who have access to the final consumer, the raw material inputs and, in particular, the genetics.

Information is becoming increasingly important in the integrated food system that is the outcome of the industrialization of agriculture. However, along with the increasingly important role information is playing, the nature of information is changing. In particular, relevant information is becoming increasingly private in nature. The overriding challenge for all agribusinesses, as a result of the industrialization of agriculture, is to adapt to the changing environment quickly enough to survive. Due to the particular characteristics of their organizational structure, cooperatives face unique challenges with respect to survival. The following section discusses the factors affecting the demise and survival of agricultural cooperatives.

Individualism Versus Cooperation

There are factors supporting predictions for both the demise and success of cooperatives in this changing business environment. On the negative side, the four factors that suggest the future demise of cooperatives in the new industrialized agriculture are: 1) the language or culture of individualism; 2) the movement by cooperatives in the direction of investor-oriented firms; 3) the time constraints individuals face in this new faster paced society; and 4) a

property rights and residual claimants argument. However, five factors that will attribute to the potential success of cooperatives are: 1) the decreasing role of government in the production of agricultural products, 2) the very survival of farmers and ranchers in the industrialized agriculture, 3) the development of niche markets, 4) the development of new generation or new wave cooperatives, and 5) the allocation of a common property resource.

Evidence suggests a language or culture of individualism is becoming more predominant among farmers and will most definitely challenge cooperative survival. Fulton notes declining membership in Canadian farm organizations such as the National Farmers Union, the Canadian Federation of Agriculture, Unifarm, and Keystone Agricultural Producers as supporting evidence of this move to individualism. Fulton and Adamowicz's logit analysis of member commitment to the Alberta Wheat Pool revealed that member commitment was explained by regular business factors. The traditional "cooperative services" that have characteristics of a common property resource were not found to be statistically significant.¹ This again suggests a movement to a culture of individualism.

Recent restructuring by many cooperatives has moved them toward an investor orientation. This is consistent with Cook's predictions of one of the options for cooperatives in stage five. As noted by Torgerson, Reynolds and Gray, this action may compromise the user-owner nature of cooperatives. The arguments given by the management, directors and members supporting the restructuring suggest the movement was motivated by a need for equity capital and the voting control remains in the hands of the user members. However, as Torgerson points out, the control by the user members is eroded with the influx of outside equity capital investment. One potential outcome is "the possibility of creating organizations that are not different

from investor partnerships and are cooperatives in name only" (Torgerson, Reynolds and Gray).

Fulton points out that an increasing percentage of farm operators depend upon off-farm income. The increased complexity of these people's lives will certainly challenge cooperative survival since effective operation of cooperatives requires active members.

A property rights argument, as identified by Fulton, provides additional evidence of the future demise of agricultural cooperatives. Utilizing Barzel's theory of property rights, Fulton describes a scenario in which cooperative members are residual claimants. The success of the cooperative in distributing the common property resource was, in part, attributed to the risk associated with different aspects of agricultural production and distribution. As Fulton notes, the changes associated with the industrialization of agriculture that decrease the variability of production are expected to make cooperatives less important.

A number of factors suggest cooperatives will serve a very important role in the new industrialized agriculture. As Torgerson, Reynolds and Gray point out, the role of government in agriculture is decreasing. There will be a need for self-help, group-action institutions to fill the void left by vanishing government programs. Cooperatives are well positioned for this task.

The increased concentration in the production and processing of agricultural products resulting from the industrialization of agriculture is threatening the very survival of farm and ranch operations as we have traditionally known them. In many sectors of agriculture it is likely that alternative business arrangements will need to evolve to take advantage of size economies. Farmers and ranchers may find that some form of joint ownership of large-scale facilities, at the stages at which minimum efficient scale is large, is the only way to survive. This joint

ownership may be combined with individual operation of other aspects of the production.² Cooperatives have the potential to fill the need in these situations. In other cases, joint ownership of marketing and processing facilities, as we are observing with some of the new generation cooperatives, will allow farmers and ranchers the necessary vertical integration to remain competitive.

The industrialization of agriculture is opening up specialized or niche markets to meet the demands of specific groups of consumers. Cooperatives have attributes that give them a comparative advantage in servicing niche markets.

The recent activity associated with the development of new generation cooperatives suggests that the cooperative form of business organization is important and will survive. In many cases, producers with historical experience in cooperative involvement are realizing the potential of the new organizational structure to vertically integrate and move into value-added processing. In other cases (e.g., the beef alliances), producers who have not traditionally been involved in cooperatives are finding the cooperative organizational structure useful in vertically integrating.

While Fulton pointed out a property rights argument that supports the demise of cooperatives, I suggest a property rights argument supporting the need for cooperatives in the new industrialized agriculture. My arguments follow the line of considering cooperatives as a common property resource.³ One purpose of the cooperative organization, then, is to allocate the public good. Historical public goods that cooperatives have provided include: offsetting an imbalance of market power, serving as a competitive yardstick in an industry, and providing a good or service not provided by an investor-oriented firm. The relevant question today is whether the new market structures that

result from the industrialization of agriculture yield a set of assets with public goods characteristics and, thus, create the opportunity to develop institutions to coordinate the allocation of the common property. I suggest that opportunities exist with respect to coordinated or negotiated markets; information; and cooperative involvement with contract producers. The coordinated or negotiated markets that are replacing impersonal spot markets in the agribusiness market place create many opportunities for an imbalance of market power, and the need for institutions to offset the imbalance may be greater than ever. Information necessary to remain competitive in agribusiness is becoming increasingly private in nature. The possibility of joint usage of the information combined with sharing the costs of acquisition creates another potential role for cooperatives. Torgerson, Reynolds and Gray point out the need for new institutions, such as cooperatives, to assist the ever growing number of contract producers in the bargaining process.

Challenges and Issues for Cooperatives

The need to adapt business structures and the way of doing business to survive, first of all, and then to take advantage of the new industrialized agriculture, will be a challenge for all businesses. The challenge may be greater for cooperatives since the democratic control feature of cooperatives has often been identified as a detriment to change in these organizations. The culture of individualism that Fulton, and Torgerson, Reynolds and Gray, discuss is a second challenge for cooperatives.

There are a number of factors that place particular pressure on traditional cooperatives in the agricultural and food sector. In some instances the success of these organizations in the past may be part of the challenge. Institutional

inertia is always a hurdle when it comes to change. It may be difficult for managers, directors and members of cooperatives, who have experienced success in the past, to make the necessary adaptations to meet the challenges of industrialized agriculture. For many locally owned cooperatives across the country the challenge will be mere survival. These organizations are facing pressure from a loss of markets due to the industrialization of agriculture, a loss of members due to the aging nature of farmers and ranchers across the country, changing technology and government regulations.

The emergence of new generation or new wave cooperatives is very exciting and encouraging for the cooperative sector. However, there are some specific challenges that these organizations will face. The first challenge is survival. These cooperatives are entering business sectors that are hard nosed, extremely competitive and in which failure is a common occurrence. A second challenge will be the complexity of these business organizations. Two important features of the new generation cooperatives are the tradeable shares and the long-term contractual agreements for supply of raw materials. While most analysts agree that these features are important to the success of these organizations, the question arises as to whether the complexity of these organizations may threaten their survival in the future. In many cases, the members of the new generation cooperatives are new to the cooperative system. This raises the question of whether these people will know how to work together to survive. Finally, as with every line of business, there will be some failures. The manner in which decision makers inside the new generation cooperatives and those from the traditional cooperative sector react to the failures when they occur will be an important factor in the long-term success or failure of this new form of business organization.

Research Directions

The dynamic nature of agribusiness today and the corresponding challenges facing cooperatives have implications for the directions of future research. The new and emerging business relationships, involving alliances and partnerships, are dramatically changing the nature of the business environment. There has been limited research that explores the nature of these business relationships. There is an even greater need for research exploring the implications of these new business relationships for all of the constituent groups including farmer and rancher producers, cooperatives, and investor-oriented firms. One particular category of business relationships with implications for cooperatives is the joint venture and strategic alliance agreements that are becoming increasingly popular between agricultural cooperatives and investor-oriented firms. Very little is known with respect to 1) the extent of the opportunities and (2) the constraints placed on the cooperatives and their members from these new relationships. The opportunities lie in the fact that the cooperatives can 1) gain access to markets and information not otherwise available; 2) gain access to facilities without the full capital investment involved if they went it alone and; 3) diversify risk. The potential constraints or pitfalls arise because the objectives of cooperatives and investor-oriented firms may differ. The joint ventures and strategic alliances with investor-oriented firms may compromise objectives of the cooperative, such as providing a good or service that an investor-oriented firm would not provide.

There is little dispute that the industrialization of agriculture is resulting in increased concentration in the production and processing of agricultural and food products. However, little is known about the minimum efficient scale of operation in this new industrialized

agriculture. Research is needed to explore where efficiencies can be achieved; the alternative organizational structures that are feasible to achieve the efficiencies; and the implications of these organizational structures for all constituent groups.

As Torgerson, Reynolds and Gray point out very clearly, future cooperative research needs to be multi-disciplinary. Cooperative businesses are becoming increasingly complex and insight from disciplines outside of agricultural economics will be essential to understanding these organizations. In addition, new generation cooperatives are bringing in members that have not traditionally been part of the cooperative community. Again, the need for multi-disciplinary research arises since these new players in the cooperative sector may behave differently than the traditional members.

The recent "hype" with the development of new generation cooperatives is generating a great deal of interest with respect to the opportunities for producers to enter the realm of value-added processing. While Harris, Stefanson and Fulton describe the organizational features of new generation cooperatives in the context of cooperative theory, little is known about the specific risks and rewards of these organizations. This research is essential so that, as these businesses continue to be developed, the organizational structure can be adapted appropriately. In addition, insights regarding the risks and rewards will be important when recruiting the appropriate mix of member investors.

It is interesting to note that at the same time farmers and ranchers are investing large amounts of capital into new generation cooperatives, the traditional cooperatives are facing significant financing challenges. Theoretical and applied research is required to explore 1) the importance of each of the features of the new generation cooperatives in their success

and 2) how these features might be adopted by the traditional cooperatives. Questions to be addressed include: "How important are the tradeable shares to member investors?" "How important are the long-term contractual input supply agreements to the management team?" and "How important are the long-term contractual input supply agreements to the members?"

Conclusions and Challenges

The path for the future of cooperatives is not clear. While there are a number of factors that suggest the demise of agricultural cooperatives, there are also a number of factors suggesting the need for various forms of joint ownership and a necessary role for cooperatives. However, even though the potential exists for cooperatives to become an ever more important component of the agribusiness system, their future depends upon the preferences of the players as the businesses are organized.

Education could potentially play an important role in the future of cooperatives at this important juncture. Many in agribusiness are not aware of the business opportunities that arise from utilizing the cooperative form of organization. Education about the function and role of cooperatives needs to be directed to the general public to increase awareness and understanding of the role of cooperatives, and to cooperative employees and cooperative members to help them understand the unique cooperative features, especially those with public good characteristics. Finally, I reiterate Torgerson's call for increased cooperative education in our universities and colleges to ensure increased appreciation of cooperative businesses by all business and community leaders and to provide initial background training for the leaders that will move into management positions in cooperatives.

Notes

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1. In particular, variables that were found to not be statistically significant in explaining patronage include: the importance of the cooperative representing farmers' views on policy matters and the importance of the cooperative being active in the community.
2. One example of this would be the joint ownership of a 2,400-sow farrow-to-nursery operation with feeding barns on the individual farms.
3. It is important to distinguish between a common property resource and an open access. In both cases the allocation of a public good is in question. In the former case the individuals perceive joint ownership of the good while in the latter case it is an open access.

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