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Agricultural research for the small farmer

The necessity for sound thinking in agricultural research is becoming increasingly apparent; political and social trends have resulted in questions being raised by non-farm people concerning the benefits and consequences of that research. The complex nature of the U.S. food-fiber production system, and the interdependence of all public and private activities on which the system depends, hinders easy understanding of it and makes it exceedingly difficult to answer questions of social and economic benefits in simplified and concise ways.

Agriculture, and the nature and focus of agricultural research and extension, are being changed by forces outside agriculture — by trends and developments in society as a whole. This fact more than any other should remind us that we have an obligation to the public at large to identify more precisely than we have in the past where the benefits and consequences of our efforts fall within our society.

One misunderstanding which needs attention is in the area of research assistance for people interested in small or part-time farming. Because of the necessity to remain competitive and market its products successfully, farming in the U.S. has evolved from relatively small vocational activities into business-like enterprises. However, it is often mistakenly presumed that new technology is the driving force of that change. It cannot be said that in all instances new technology has been passive in the change, but, by and large, new agricultural technology has developed as a consequence of economic factors beyond the control of the agricultural system. The same economic forces and demographic distributions that have changed the nature of marketing dry goods, household items, food and other groceries, gasoline, and automobiles have affected the agricultural production system.

The primary goal of our scientists engaged in agricultural research is to gain a better understanding of how plants and animals grow and reproduce, what hinders or promotes that growth and reproduction, and how mankind can exercise more control of these processes to remove as much uncertainty as

possible between planting or breeding to harvesting and marketing a given commodity. In studies of the role of nitrogen fertilizer in plant growth, it is of little consequence whether a farmer applies the fertilizer by hand or by airplane, but it is important that only correct amounts be applied regardless of the method. In studies to improve dairy cattle to yield more milk, or beef cattle or chickens to gain more weight per unit of feed, small operators should profit from that information as well as large ones because input costs relative to output returns will determine the economic viability of the enterprise and ultimately the price of food to the consumer.

So what is the problem? As I see it, a major reason for the belief that new technology in agriculture is designed primarily for the large operator is that such enterprises are more likely to seek out and adopt new information quickly. The small or part-time farmer is often unaware of what information is available or how to adapt that information for his or her own use.

Just as the University is engaged in efforts to improve access to its teaching programs for all potential qualified students, it is appropriate for our extension programs to improve our efforts to make available the information we have to all people who need and can use it. Our agricultural sciences program recognizes this challenge and has taken steps to do something about it. We have a series of research efforts under way, focusing on the problems of surviving successfully as a small or limited-acreage producer. In an effort to improve access to information available through our research efforts, we have prepared educational material specifically for the small farm operator. We have employed specialists to work with both rural and urban people who have not traditionally sought advice from Cooperative Extension to solve their problems.

Agriculture and the food production system is a complex of interrelated activities. Those interrelated activities are not under uniform control and the farmer, whether large or small, often feels like a victim of the system rather than a partner in it. The limited-resource farmer will quickly become a victim unless the system is fully understood and the goals of the endeavor are clear.

Our goal is to help that system maintain its strong and important role in the U.S. economy. Our goal includes the strengthening of all those who are a part of that production system and to help those people who wish to enter it to gain a successful and satisfying experience. The challenge is not new, but is much more complex in today's world. We are prepared to face that challenge with constructive programs.