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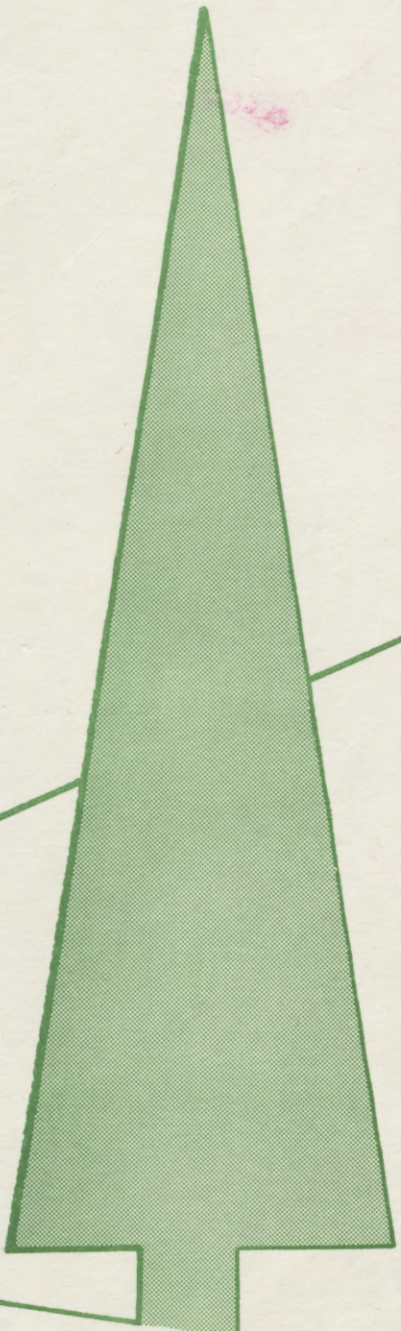
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1967 ANNUAL MEETING

UNIVERSITY OF MAINE
ORONO, MAINE

JUNE 26, 27, 28, 1967

ADJUSTING TO STRUCTURAL CHANGES IN AGRICULTURE

Joseph Ackerman

Agriculture evolved slowly through the ages. Even during the thirty years from 1910 to 1940 changes were comparatively slow and people were unprepared for the revolutionary changes that followed. The rapid changes we have experienced during the past two decades caught us unprepared and left us somewhat bewildered, disorganized, and always trailing a little behind the times. If we look ahead to changes that will occur in both the farm structure and managerial situation, we can get organized now and devise ways of making our research and educational work far more effective in the future than in the past in meeting the needs of farm people.

The major events that have determined and will determine the pattern of the farm firm during the next thirty years probably have already occurred. Our task is to seek out pertinent situations and trends and with some insight synthesize them into what might be a reasonable prediction to be used as a guide in formulating our future policies and programs. We need to be concerned with the fundamental changes and how to guide them to serve the best interests of all. These changes, if wisely directed, will bring a higher level of living to farm people and others. Unwisely directed, they can bring hardship and frustration to many.

Not only have the methods of agricultural production changed, but also the organization of the farm business and the institutions that serve agriculture. Farmers themselves have changed, perhaps most of all. Farmers of today are more sophisticated than those of the past. The level of their management ability is constantly rising. Quite obviously we will need to restructure our educational efforts and facilities in order to keep pace with their increasing demands. They are becoming increasingly aware of the need for modernizing their programs to cope with rising costs and to meet growing competition. They know that programs and procedures that were adequate yesterday are likely to be obsolete tomorrow. They want information required for making more complex decisions as technology continues to advance. They are eager to take advantage of research findings as soon as they become available. They want additional services to help them solve technical problems and their credit and capital problems. People with vision, imagination, and determination will be needed in order to provide the necessary information and services.

We need to try to determine where we are at the present time and where we are likely to be in another decade, then raise questions in the minds of all of us concerning the implications. Farm numbers are going to continue to decline, and the average size of the farm will continue to increase. Capital requirements will probably increase at a faster rate than size of farm. By 1980, if recent trends continue, farm numbers could be down to about 2 million compared with 3.4 million for 1965. About half of the farms will have sales above \$10,000 per farm. These farms may account for perhaps 95 percent of total cash receipts, 90 percent of total production assets, and 75 or 80 percent of total labor inputs. Managerial requirements will continue to increase as farm businesses become larger and more complex. Farmers will depend increasingly on outside sources for farm supplies and services. These and many other changes will call for adjustments in the organizations that serve farmers.

There may be some who will be disappointed in not finding more answers to the question of implications, but the value of this meeting can be judged on the basis of whether we set the stage in order to start finding answers for the questions we face. I will try to point up some of the questions that have run through my mind as I have sat in some recent meetings.

First, let us consider the implications for education. How do the technical and economic problems of farmers change as their operations become larger and more specialized? How can extension meet the educational needs of these farmers? What level of training is needed for the county staff? Will the county continue to be the appropriate unit for serving farmers, or should extension shift to regional offices with highly trained specialists? Should extension education become more intensive and more formally structured rather than advisory in nature? Will extension need to reach people beyond the confines of agriculture? What is extension's role with the nonfarm agricultural business? Is extension concerned principally with problems internal to these businesses or with the way they serve farmers? Will farm services offered by nonfarm agricultural firms overlap or compete with extension efforts? Can nonfarm agricultural businesses be used as an arm of extension in farmer education? Can the needs of the agribusiness group be met without serious problems of balance in research support and in extension's total program?

As we consider the implications for teaching programs in the colleges of agriculture some of the questions that need to be answered are: For what kinds of positions are we training students? What changes are required in our training program and our curriculum to equip our graduates to best fill these jobs? Are our undergraduate programs too specialized in order to meet the needs of the modern commercial farmer? Do we need more people with graduate degrees? Should these degrees be research oriented? Is it desirable to require five years of undergraduate work rather than four? What types of retraining programs are needed to insure employment under changing conditions?

With respect to implications for our research program, some of the questions that still remain to be answered are: What changes are needed in either the kinds of research conducted or the machinery for administering research? What proportion of the research resources should be devoted to the various sciences, and how should the research be related? Should research be conducted in response to pressure? Should we predetermine the relative pay-off of research activities in order to obtain funds? Which research activities should be conducted by public agencies and which by private? What kinds and portions of research are now and will be needed as a result of changes within farm firms? Will electronic data processing and analysis of farm accounts increase, and to what extent will this information become available for direct use by practicing farmers? Will such processing soon or ever reach the stage where with only a set of directions the farmer can feed in data from his farm and get answers for decision making? Who should support research for this kind of objective? What would be the effect of such a development on research and educational programs?

In the area of implications for organization of farm-related markets many questions also need consideration. Will technical assistance from firms supplying farm production inputs become increasingly important? Who will pay for this assistance and what is the prospective pay-off? Will sales-related finance become increasingly important and what will be the effect on credit institutions?

How do the prospective changes differ between capital items and operating inputs? What forms will capital leasing take in the future? What changes are in prospect for relations between manufacturing and sales firms in farm supply? What are the prospects for further vertical integration between producing and marketing firms in the food industry? What criteria are used to determine procurement practices of firms buying farm products? What are the effects? What are the opportunities for farmers collectively to integrate forward into the food chain? What changes are occurring in bargaining and uncertainty bearing, and how are these related to structural changes in the farm firm? Will farm leasing become increasingly important on a full-tenant basis, on a part-tenant basis? What are the consequences for individual firms and institutions that finance farmers? How will banks respond to needs of an agriculture increasingly sophisticated in its capital and managerial requirements? What problems do vertical and horizontal integration create for intergeneration transfer of farm resources?

We are faced with many unanswered questions about organization of farm-related services. How will structural changes in the farm firm affect programs of farm organizations--in the area of education, in the areas of farm supplies, marketing, and political action? What are the consequences for farm organizations of increasing commodity orientation of individual farmers? Of declining population in rural areas? What responsibilities will be assumed with respect to low-income farm families and low-income rural communities? Will a variety of organizations develop specialized by commodity orientation and income strata? In what areas would such organizations compete? In what areas would they complement each other? How are services of farm organizations affected by the integration of farm-related firms? What will be the role of professional farm managers in providing technical and financial management assistance for farm suppliers, marketing firms, manufacturers, and financial institutions? What are the effects of off-farm migration on the quality and costs of community services in depopulating rural communities? What are the effects on the quality and costs of such services in areas of urban expansion? Are income transfers justified to reduce disparities in financial support of health, education, and other social overhead services in rural communities? What changes are in prospect in demand for social overhead services in rural communities as farms increase in size, specialization, and in capital requirements? What educational changes are implied for school facilities in future rural communities?

We also face important questions concerning the implications for the organization and staffing of the colleges of agriculture and related educational and research services. Should the present organization of our colleges of agriculture be replaced by a new, more responsive, wider and stronger system just as a multiple lane interstate system is replacing the faithful but narrow highways which no longer suffice? How restrictive is the departmental structure of our colleges and our system of degree offering? Should any degree program or a college be eliminated or combined with others? Are new programs needed in view of new technology? How can the staff or its teaching capacity be expanded to meet the needs of the increasing enrollment in the immediate years ahead? What should be the qualifications of new staff members? Should all of the staff be located at the central university or scattered throughout the state?

Our colleges of agriculture have contributed much in making the United States different from other countries of the world. Through their research and educational activities they have helped supply the United States with abundant low-cost high-quality food produced with an ever diminishing amount of labor. They have done a great deal to increase the material well-being of the citizens of the United States.

Agriculture is not going to stand still; it is going to continue to move forward perhaps at an accelerated pace. As we look ahead we can see that technological advances in the next decade will be some of the most far-reaching in our history. An exciting experience lies ahead for those who can contribute to the progress that flows from the technological development. The America that we enjoy today was built by men and women who had dreams and the will and initiative to fulfill those dreams. America will continue to grow in proportion to the capacity of her citizens dream, imaginatively and constructively. With such dreams they will begin to find answers to many of the questions I have mentioned.