In many respects man takes food production and distribution for granted even though in modern society the process and activities involved are complicated, interrelated, and defy simple description.

**TEN ASSERTIONS**

The following ten statements place emphasis on the food industry concept with special concern for the retail sector and the increasing trend for Americans to consume more food away from home. Real struggles for power within the food industry are seen at the interface between retailers and their suppliers. It is here that substantial changes in market structure are now in progress and that the process of change might well be influenced.

1. The food industry is the nation's most important industry, largest employer, and a key factor in this nation's continuing economic growth and development. Included in this description of the food industry are all the components—input supply, farming, food processing and manufacture, wholesaling and storage, retailing, and food preparation for consumption or delivery outside the home.

2. Much of the incremental growth and value added for the industry as a whole are in two sectors—value added in retailing and for food prepared and eaten away from home.

3. Consumer wants and demands must be reflected back through the industry in an increasingly complex, specialized, interdependent system, where free exchange of information often is not in the short-run interest of those who have it.

4. Input suppliers at one end and retailers and those who supply food to consumers outside their homes at the other have the greatest independence within the giant food complex. Input suppliers have other outlets for their products besides farmers and processors, and food is not the only item retailers can sell.

5. Farmers are no longer necessarily the weakest economic group within the industry. Reduction in numbers reflects reduced political power but greater economic power and potential. Increasingly, this economic potential is being harnessed through relationships with input suppliers on the one hand and processors on the other.
6. Traditional concern by farmers and processors for relative bargaining power with each other may well work to the disadvantage of both. Improving their joint position with respect to retailers is much more critical.

7. The prices at which products are transferred from one sector to another within the food industry still deserve the major focus of attention. Price determination reflects relative power between sectors despite more recent emphasis on nonprice competition, specification buying, and brand identification. The decline in importance of central markets—farm and wholesale—increases the importance of efficient and equitable price discovery at every level in the total food industry.

8. Specialization of functions within each segment of the food industry will prove to be the most efficient way to organize production and provide desired services.

9. Vertical integration, through ownership or control of other segments of the food industry by a group with its origins in one sector, will not increase efficiency or provide true economies in most cases. Diseconomies associated with management and control, inequitable internal transfer prices, and lack of appropriate information systems remain so substantial that individual firms will not succeed in providing the necessary internal integration in the long run.

10. Land-grant universities and extension can and should take leadership in improving communication among all the segments of the food industry. Special emphasis should be placed on the relationships between retailers and their suppliers—farmers, processors, manufacturers, and wholesalers.

GROWTH AND CHANGE IN THE FOOD INDUSTRY

The food industry continues to be a center of economic growth. One means of gaining perspective on the various sectors and their contributions is to look at the aggregate value added by each. Figure 1 focuses attention on this concept. Starting with input supply, it shows the subsequent value added by farming, processing and manufacture, wholesaling and retailing, imports, and food consumed outside the home. One might divide the food industry into a larger or smaller number of components and develop different definitions. But there is merit in thinking about the food industry at each stage in terms of value added as income is generated.

Development of a similar set of aggregate accounts for individual states would naturally lead to quite different results. New York is an urban state and a net importer of food products. But even in states
with net exports of food the importance of value added by the sectors which bring food from the farm to the consumers is obvious.

Study of the diagram provides some other reminders. Purchased farm inputs now make up a substantial and increasing part of gross farm income. Value added by the farm sector is not likely to increase as substantially as in other sectors of the food industry. As the number of commercial farmers and farm workers continues to decline, however, value added per worker in this sector will be large and continue to grow, even though the aggregate is likely to be fairly stable as more inputs of production are purchased off the farm.
Traditionally, agricultural colleges have had substantial contact with and knowledge about the two sectors in the food industry closest to farming. On the one side are the input suppliers. On the other are the processors and food manufacturers. Input supply has generally been characterized by large firms specialized in one or two lines of production usually serving other industries or sectors as well as farming. Most of these firms are economically strong, well financed, and substantially concerned about the economic health of the farmers they supply.

The processing and food manufacturing sector is different in many ways from the input supply. Consolidation and the need for structural change is much more obvious. Many relatively small family businesses remain to compete with the corporate giants. Old plant and equipment is common. Margins are highly variable from year to year and in some cases regularly narrow. Brand identification in markets that are increasingly regional or national, rather than local, is a continual issue. Corporations with little or no experience in food processing or manufacture have been acquiring companies or producing units while old line companies with familiar names and experiences have been moving out of the business to seek more profitable returns on their capital.

Looking at the whole industry, food processing and manufacture is in a critical, central position. Historically, this sector grew up in an atmosphere where it was faced on the one side by a large number of farmers, whose self-interest, independence, small size, and wide geographic distribution discouraged unity. On the other side were a large number of small, family owned, retail businesses or grocery stores that, generally, simply accepted prices established in wholesale markets.

Today, things are obviously different. On the one side farmers have sought through market orders and through producer organizations to increase their market power. Processors no longer can dominate farm prices without substantial public or farm reactions. On the retailing side the large regional chain or association has become dominant with the capacity and willingness to process their own products, if necessary, in order to bargain effectively with their suppliers as they compete internally for larger shares of the consumer market for foods. Processors and manufacturers no longer have the balance of power when bargaining in either direction. In many cases it is quite the reverse with economic pressure pushing individual firms ever closer to substantial linkages with farmer ownership and control on the one side or retailer domination on the other.
Beyond the retailer serving the housewife is an increasingly important dimension of the food complex. More and more food is consumed outside the home. Growth in this sector during the last decade is more substantial than we can document adequately. But the lack of an adequate description of this process does not make it any less real. Value added by fast food outlets, by the more traditional restaurants, or by institutional food services and concessions is probably the most significant growth component in the whole food industry. Mechanisms to service these institutions have grown apace, often outside the existing structure but sometimes solidly within it.

Service industries are as much a part of the production process as farming. Only the form of product is different. If our discipline is to serve the food industry effectively, and I believe that is one of its historic reasons for being, then more energy and effort must be placed on understanding the whole system and particularly the part closest to the consumer, where we have had the fewest contacts and where change is at least as rapid as in farming and processing.

**FOOD AND PERSONAL DISPOSABLE INCOME**

For the sake of emphasis, let me repeat some facts all of us tend to take for granted. (1) Consumers spend more of their disposable income for food than for any other item. (2) The share of consumer incomes spent for food has been decreasing for many years. The average American family spends 16 percent of its disposable income for food in all its forms today. Ten years ago it spent 20 percent; in 1950, 22 percent; in 1940, 25 percent. How long will this downward trend in the proportion of disposable income spent for food continue? The proportion of income spent for housing is no longer falling. Transportation expenses and medical and dental costs are rising relative to incomes. Could or should the trend for food expenditure change?

My own position on this point is clear. One sign of an efficient, healthy, and dynamic food industry in total is the declining proportion of human effort and income required to provide an ever wider and more interesting diet to all the citizens in a society. Public policy which was consciously designed to increase the proportion of American real incomes spent for food and food services would be counter-productive and in the long run in the best interests of no one. But this does not mean that the food industry should be squeezed. Nor does it mean that the capital and human resources invested in the food industry should earn lower returns than in other industries. Rather it asks for a conscious concern to keep the industry in its many facets dynamic and healthy. It means working to keep the individual
sectors from turning inward or seeking artificial protection, monopoly power, or short-run gains at the expense of all in the long run.

It should be clear by now that I am arguing that a central concern of agricultural economics must be with the structure and functioning of the whole food industry complex. On the one hand we should search for mechanisms to insure that this industry responds effectively to the wishes of the final consumer. At the same time we must be concerned that the resource owners and labor force in all sectors of this industry receive equitable returns for the services they provide.

TRANSFER PRICES, A CRUCIAL ISSUE

Economists have always recognized price as a mechanism for allocating resources, sending signals through the economic system, balancing supplies with market demands. As the role of central markets in the food industry has been reduced, the process of price discovery and price determination has become more complex. While it is easy to criticize the functioning of central markets for specific commodities, it is much more difficult to propose efficient, equitable alternatives to perform the same functions. Any individual who tries to make or establish prices is human, open to error and subjective judgments. A substitute for a self-correcting market system must also be subject to some kind of automatic checks and balances plus a stream of verifiable objective information.

The vertically integrated corporation must be concerned with prices of intermediate products at all stages of production if it is to evaluate internal performance. The term, transfer prices, has been used to describe the substitutes used within corporate entities or businesses of any kind to take the place of market prices when they are not available. It is generally agreed, at least by economists, that the opportunity cost principle should be used in establishing transfer prices. That is just another way of trying to approximate market prices at every stage rather than using internal costs or some other accounting convention.

In the food industry the issue of transfer prices between sectors is very real. People in the industry quickly acknowledge that many markets are "thin," particularly at the wholesale level. Specification buying and similar contractual agreements often assume the existence of a competitive market with terms of the contract related to a specific market situation. But nonprice competition is increasingly important in decision making. The existence of extras, premiums, provision of "free" services, assumption of risk, delay of ownership, special terms of credit all affect price even though it is not easy to measure that effect in simple terms.
One challenge to the land-grant system and the public sector is to become a respected, objective third party in difficult, thin markets. Such a position associated with price discovery and price determination must be earned by performance. It cannot or should not be legislated. Perhaps an analogy to the role of the professional mediator between business and organized labor is suggestive. Market prices on both sides of the processor-manufacturer sector are particularly critical. In some cases, farm prices are effectively established in competitive markets, and no special action is necessary. In others, like that for eggs, the need to search for an alternative to present pricing arrangements can be agreed upon even if the objective, respected third force and the mechanism to do it is less obvious.

The potential for substantial struggles within the food industry is greatest between retailers and their suppliers. Academics and public employees could well take the leadership in helping the food industry see itself in perspective as a large, interdependent community with substantial economic and political power. Because each of the sectors has an impact on the others, an intelligent concern for the health and welfare of the parts might well reduce ruinous internal conflict without encouraging oligopolistic pricing and management practices.

SOME SUGGESTIONS FOR EXTENSION AND RESEARCH

This presentation has tried to focus on the concept of a food industry which starts with the resources and inputs needed and used by farmers and then follows them through all the productive activities that change raw products into final items for consumption in or outside the home. Emphasis has been placed on the retail sector. This is where final demand is exerted, where market power is concentrating, where value added and economic growth is substantial.

As a complement to the assertions presented earlier, the following suggestions for extension and research programs seem to be logical outgrowths or conclusions.

1. Professionals in research and extension should give the food industry concept a high priority in their programs. As a minimum it would mean learning as much as possible about how the various parts of the food industry are related to each other. It would involve evaluation of the strengths and weaknesses of the component parts and an effort to learn how leadership in each sector sees its position. It might well lead to the formal education or study programs which are planned with the interaction of food industry leaders.

2. The food industry complex operates in local, regional, national,
and international markets. The focus for industry policy determination is regional or national. So are the markets. Programs provided by land-grant colleges, extension, and much of research are built around state needs and state boundaries. In many respects, the institutions of public education are more provincial than the people and the institutions they seek to serve. Despite the constraints of public financing, more must be done to build programs which cut across state lines and encourage genuine interstate cooperation. This will require a high order of administrative leadership at the federal and state level.

3. At the national or perhaps regional level, efforts should be made to develop a forum in which representatives of the input suppliers, farmers, processors and manufacturers, retailers, and food purveyors meet to understand each other's and over-all industry problems. Initially, the workshops could focus on new or additional research areas. Alternatively, they could make efforts to look ahead to changes in the food industry and make presentations to each other on outlook, growth, and potential problem areas. Another approach would be an appraisal of needed public information services, both where present statistics and reporting are adequate and where they are limiting and lead to poor industry decisions. Topics to be held in reserve for a time when there is some evidence of internal cohesion among forum members would include price determination, the functioning of current markets, and the politics of industry support and industry potential.

4. Agricultural economists might well spend more time talking about and discussing national food policy rather than national farm policy. Clearly such discussion would have a somewhat different focus, where the product rather than the producer or production unit is central. Food policy implies concern for more than one sector of the economy. The central role of the consumer, which is clearly recognized in farm policy debates, would by name be given greater priority. Natural resource policy, issues associated with resource ownership, and the rural poverty issues could be more conveniently dealt with as separate issues from food policy.

A few concluding observations may be in order. This presentation has said little about the world of cotton, tobacco, and wool. It is colored by life in an urban environment. It reflects a strong belief that diseconomies of size are very real in many corporations, government institutions, and business organizations. Merely concentrating power at some base in the system will not produce efficiency. I believe the functioning of the whole food complex is central to the business of agricultural economists and deserves more of our energy and attention.