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THE FOOD DISTRIBUTION INDUSTRY: UNTAPPED CLIENTELE FOR AGRICULTURAL ECONOMISTS

Oral Capps, Jr.

The Southern Agricultural Economics Association (SAEA) was formed at the 1968 annual meeting of the Association of Southern Agricultural Workers (ASAW) held in Lexington, Kentucky. Now, in approaching our twenty-fifth year as an association, we convene once again in Lexington. As a student of mathematics, I find this symmetry is quite appealing. I am deeply honored to have the opportunity to serve the SAEA as your President for the upcoming year and to present the ninth presidential address of the SAEA. It is especially meaningful to follow in the footsteps of Joseph Havlicek, Jr., my mentor and dear friend, who delivered the initial presidential address in 1984.

Before I jump headlong into my topic, it is prudent to spend a few moments to reflect on remarks given by past presidents. The comments provide a perspective drawing for my presentation. Havlicek justified the existence of regional agricultural economics associations such as the SAEA. Conner noted that forces directing the growth and development of the profession are changing. Ikerd cautioned that U.S. agriculture is at a crossroads, wherein the future of the land grant concept and of the agricultural economics profession is dependent on the choice between domestic and international alternatives. Bateman observed that the key to survival as a profession is how others perceive us in the whole and not as fellow staff members at our place of employment. Batie called attention to the issue that agriculture is seen as the source of, not the solution to, particular problems such as water quality and food safety. Trapp recommended the use of dynamic theory in studying physical resource allocation problems. Adrian emphasized the importance of undergraduate education in departments of agricultural economics. Finally, Libby suggested diversity as a response, a strategy, a conscious approach by agricultural economists in land grant universities seeking a useful role in the future.

The chief commonality of these past addresses is to foster study and understanding of agricultural economics and its applications to problems in the agricultural sector. This commonality as well happens to be one of the objectives of the SAEA. To be sure, relevant issues facing southern agriculture fall under the domains of natural resources and the environment, agribusiness, international trade and development, community development and rural revitalization, farm management, production, marketing, and finance. What I wish to concentrate on in this address are issues pertaining to the food distribution industry. I argue that the food distribution industry is an appropriate, yet largely untapped clientele of agricultural economists. Beattie in his 1991 AAEA Presidential Address recommended that we should purge our vocabulary of the term *clientele* in favor of *student*. With all due respect to Professor Beattie, I still employ the term *clientele*.

To paraphrase Trapp, a presidential address provides a unique opportunity to express one's biases. Given my working relationships with the food distribution industry (in fact, I am a past president of the Food Distribution Research Society), this topic certainly qualifies as one of my biases. In baseball, when the game is in balance, a good pitcher, if he is to be beaten, will be beaten by his best pitch. This subject matter is my best pitch.

JUSTIFICATION

To be on common ground, I define the food distribution industry to include food processing or manufacturing, food wholesaling, and food retailing (supermarkets, convenience stores, and food service). Polopolus in his 1982 AAEA Presidential Address perhaps paints a better picture of what I refer to as the food distribution industry with the phrase, beyond the farm gate.

Currently about 400,000 manufacturers, wholesalers, retailers, and food service firms engage in food processing and food distribution. The food marketing system in the United Stated embodies a variety of functions, a variety of distribution systems, employs 17 percent of the work force, and contributes 16 percent of the gross national product (Manchester). This network of processors, wholesalers, retailers, and restauranteurs was responsible for purchases of roughly \$100 billion in U.S. agricultural commodities and \$19 billion in foreign agricultural commodities in 1988. Food processing added about \$88

Table 1. Value Added to the U.S. Economy By the Food and Fiber System, 1975 and 1988

	Value Added 1975	Value Added 1988	Percentage Change
Sector of the Food and Fiber System	(billion \$)	(billion \$)	(%)
Transportation, Trade, and Retailing	96.8	239.2	147
Eating Establishments	25.7	69.1	169
Food Processing	38.7	82.9	114
Farming	43.3	58.3	35

Source: U. S. Department of Commerce, Stastical Abstract, 1990.

billion to the raw food supply. Retailers and whole-salers added \$114 billion, transportation firms \$22 billion, and food service firms \$68 billion. Finally, as a share of consumer expenditures on food, 75 percent is a direct result of the value added in handling, processing, and distribution beyond the farm gate (Christy and Connor).

As exhibited in Table 1, the sectors of the food distribution industry labeled transportation, trade, and retailing; eating establishments; and food processing experienced the most growth in terms of percentage change of value added from the time period 1975 to 1988. For these sectors, value added over this time frame changed 147, 169, and 114 percent respectively. In contrast, the value added by farming changed the least, namely 35 percent. As given in Table 2, the growth rate in employment for the transportation, trade, and retailing as well as the eating establishment components of the food distribution industry was 14 and 22 percent. On the other hand, the growth rates in employment for food processing and farming were negative, on the order of 20 and 40 percent respectively.

The importance of the food distribution sector is clear. Yet, as Polopolus (p. 803) pointed out ten years ago, "agricultural scientists, including agricultural economists, have tended to place undue emphasis upon the technological, economic, and social aspects of production agriculture; while public investments in research and education for the production side of agriculture are admittedly inadequate, the lack of attention to the technological and economic prob-

lems of the balance of the food and fiber system is deplorable."

The directive to focus attention on the food distribution industry is consistent with the Hatch Act of 1887, which established agricultural experiment stations, and with the Agricultural Marketing Act of 1946. Section 1 of the Hatch Act states its purpose "...to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture...." The Agricultural Marketing Act of 1946 imposes responsibilities similar to these in the Hatch Act, but more narrowly applied to marketing research. Moreover my directive is in line with Libby's theme of diversity. To quote Libby (p. 10), "we must deliberately, but ever-so-gently, eliminate the perception that land grant expertise is just the technical support base for commercial agriculture. The perception gap goes both ways—to those who ask what we have done for them lately, and those who never considered the land grant university relevant to their needs."

Serious consideration needs to be given to fostering the understanding of agricultural economics and its application to those who work in the food distribution industry. The overall purpose of this paper is to challenge our profession to think about some important issues facing the food distribution industry, heretofore untapped clientele to agricultural economists. In the next several sections, I focus on various opportunities available to agricultural economists in this subject matter area.

Table 2. Employment in the Food and Fiber System, 1975 and 1988

	Employment 1975	Employment 1988	Percentage Change	
Sector of the Food and Fiber System	d Fiber System (million workers) (million workers)		{% }	
Transportation, Trade, and Retailing	5.7	6.3	14	
Eating Establishments	3.1	3.8	22	
Food Processing	1.5	1.2	-20	
Farming	3.0	1.8	-40	

Source: U. S. Department of Commerce, Stastical Abstract, 1990.

RESEARCH OPPORTUNITIES

This section addresses some key research issues facing the food distribution industry in the 1990s and into the next century. These issues pertain to: (1) food away from home; (2) nutrition, health, and food safety; and (3) value added in food processing and distribution; of course, this does not exhaust all possible issues. For example, the structure, conduct, and performance of the food distribution sector and information scanning technology also are worthy of attention.

As Senauer, Asp, and Kinsey make clear in their book, Food Trends and the Changing Consumer, the food industry is consumer driven, not producer driven. The basis of successful marketing is understanding the consumer. A knowledge of key factors affecting consumer food purchasing patterns and an understanding of their marketing implications are, therefore, crucial.

Food Away From Home

One of the most noticeable changes in consumer eating habits in recent years is the increased incidence of meals eaten outside the home. The change has been roughly from about one meal in four to about one in three, an increase of about 33 percent during the last 25 years (Manchester). The share of food expenditures for food away from home (FA) rose from 26.6 percent in 1960 to 45.3 percent in 1990 (Table 3). In contrast, the share of food expenditures for food at home (FH) fell from 73.4 percent in 1960 to 54.7 percent in 1990.

In real terms, FA food expenditures per person have grown far more than FH food expenditures per person (Figure 1). Real FH expenditures per person in 1970 were about \$962 (in 1982-84 dollars) compared to \$922 in 1989, a decline of 4 percent, an annual rate of decline of 0.2 percent over the 20-year period. Annual real per capita FA expenditures in 1970 were \$522 compared to \$734 in 1989, an increase of nearly 41 percent, an annual rate of increase of 1.9 percent over the same period.

Previous studies of food away from home generally consider expenditures as a single category, with no disaggregation by type of facility or by the type of food consumed (LeBovit; Prochaska and Schrimper; Kinsey; Redman; Senauer). The only exceptions to this claim are the works by McCracken and Brandt. McCracken and Brandt examine FA expenditures by type of facility, namely, expenditures at restaurants, fast-food facilities, and other commercial facilities. Yet no studies deal with FA expenditures on a commodity basis (e.g., beef, fish, poultry, vegetables, fruit, etc.).

Neither do the data sets used in previous studies reflect current market conditions. The McCracken and Brandt study, for example, employ data from the 1977-78 Nationwide Food Consumption Survey. Simply put, scant information is available on demand parameters for FA expenditures by type of facility and/or type of commodity. Research efforts are necessary to fill this void through the use of timely, current survey information on household food expenditure patterns in the away-from-home

Table 3. Nominal Expenditures for All Food, Food at Home, and Food Away from Home 1960 to 1990

Year	All Food	Food at Home		Food Away from Home	
	(\$ Million)	(\$ Million)	(% of all Food)	(\$ Million)	(% of all Food
1960	73,728	54,121	(73.4)	19,607	(26.6)
1965	86,739	60,542	(69.8)	26,197	(30.2)
1970	117,110	77,527	(66.2)	39,583	(33.8)
1975	187,959	119,850	(63.8)	68,109	(36.2)
1980	306,168	185,638	(60.6)	120,530	(39.4)
1981	330,083	198,520	(60.1)	131,563	(39.9)
1982	346,906	206,184	(59.4)	140,722	(40.6)
1983	369,386	217,114	(58.8)	152,272	(41.2)
1984	391,540	228,447	(58.3)	163,093	(41.7)
1985	407,398	235,935	(57.9)	171,463	(42.1)
1986	429,854	244,897	(57.0)	184,957	(43.0)
1987	457,927	254,058	(55.5)	203,869	(44.5)
1988	485,788	266,163	(54.8)	219,625	(45.2)
1989	513,333	282,548	(55.0)	230,785	(45.0)
1990	545,000	298,000	(54.7)	247,000	(45.3)

Source: Food Retailing Review, 1991.

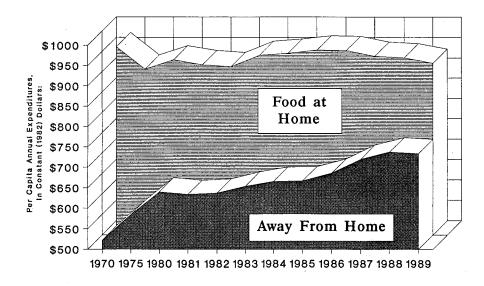


Figure 1. "Real" Away-From-Home Food Expenditures Have Grown More than "Real" At-Home Spending*

*Dollars deflated via Consumer Price Index for food at home; food away from home.

Source: Food Institute analysis of USDA food expenditure data.

market. Identifying and measuring the influence of factors affecting away-from-home food consumption behavior by *type of facility* and by *type of commodity* can lead to improved market planning for the food distribution sector.

The source of data for such efforts may come, for example, from the NPD Group—CREST (Consumer Reports on Eating Share Trends). The CREST data series, collected by the NPD Group since 1976, is gathered via a comprehensive and detailed diary in which 12,800 U.S. households record their restaurant visits and purchase of meals, snacks, and beverages. The household sample is dispersed throughout the 48 contiguous United States, targeting the reported geographic and demographic distribution of the Census Bureau. This sample is the most comprehensive data set available on household purchase patterns of food in the away-from-home market. The data series is also timely—a key aspect of research in this area.

Nutrition and Health

The vast majority (83 percent) of consumers recognize that what they eat may affect their future health, according to a 1990 Gallup survey. Consumers today are interested in, and concerned about, nutrition in the foods they consume. Some 96 percent of consumers value nutrition as a factor when shopping for food, according to a Food Marketing Institute (FMI) survey of consumer attitudes (Borra).

These surveys suggest that there is a great market potential for food products with altered nutritional

characteristics but with sensory attributes (i.e., taste), similar to those of traditional products consumed. Many people want a healthier diet but without a fundamental change in the composition of their diets. For this reason, consumer demand for animal product options, such as leaner red meats, should be substantial (National Research Council). As well, food manufacturers should respond to this signal by increasing the emphasis on nutrition and health issues in their promotional campaigns.

Health and nutrition issues are not about to fade away. Almost every new product makes some sort of health or nutritional claim. Recent changes in domestic food use have given rise to questions by those involved in food production, processing, and marketing. For example, are concerns about nutrition and health behind the decline in dairy consumption and beef consumption and behind the rise of poultry and seafood consumption?

Designing foods to make them attractive to consumers is essentially a technological development. To be fully successful, this development must be guided by information that indicates how the resulting products will fare in the marketplace. Yet relatively little is known about the role that nutrition and health information plays in determining the demand for food. The linkage of nutritional awareness and food demand has been addressed in recent works by Brown and Schrader and Capps and Schmitz who investigate the effects of cholesterol information on consumption of eggs and meat products, respectively. Additional efforts in this area are worthwhile.

Research is needed to identify and assess non-economic variables (e.g., attitudinal variables) that may be important in explaining variations in the consumption of food products. Also, consumers receive information about nutrition and health from several sources: (a) doctors, nurses, other health professionals; nutritionists, dietitians, or home economists (people source); (b) radio, television, newspapers, magazines, books, government health organization publications, food company publications (media source); and (c) food packages or labels (package source). Research to assess the impacts of the source of nutrition and health information on food consumption, ceteris paribus, merits attention. This factor constitutes in essence a measure of the role of influencers on food consumption behavior. With the exception of the work by Ippolito and Mathios, studies to assess the impacts of sources of nutrition information on food expenditure or consumption patterns are lacking.

In conjunction with the issue of the role of influencers on food consumption behavior, new labeling proposals are under consideration by the federal government (Bacon). Few policy changes have been initiated since 1975 when nutritional labeling was originally implemented. Research in the food distribution area can play a pivotal role in addressing this issue. For instance, it is possible to update the work of Lenahan et al. to: (a) discover the labeling format most acceptable to the consumer for presenting nutrition information; (b) discover the outlet most used by the consumer for receiving nutrition information; (c) identify the rate of perception, understanding, and use of nutrition information on labels; and (d) determine the nature and importance of nonuse benefits (Padberg) of nutrition information as perceived by consumers.

Food Safety

Consumer concerns about food safety include pesticide and herbicide residues on agricultural products, additives and preservatives used in food processing, and antibiotics and hormones used in livestock feed. The levels of apprehension about food safety are seemingly on the rise (Lane and Bruhn). Yet information currently provided to consumers is typically inadequate to assess potential risks. Proposition 65, the California initiative passed in November 1986 which requires labeling of food that contains toxic chemicals, is, however, one example of an effort toward ameliorating this situation.

The nature of food labels may have been determined by concerns about food safety, but we generally have done a poor job in representing food safety information to consumers. At this time, consumers

are unable to extrapolate the actual risk of consuming foods based on the knowledge that a hazardous substance is present in it. To quote Robert J. Scheuplein from the Office of Toxicological Sciences in the Food and Drug Administration (p. 353), "one of the major sources of confusion about the risks from environmental and food-borne exposures to carcinogens comes from a general lack of perspective concerning the magnitudes of the risks from various contributing sources."

Policy relating to most hazards has addressed abatement. Since the enactment of the Delaney Amendment in the 1950s, hazards have been eliminated or controlled rather than labeled. The Delaney approach to policy seemed right in the 1950s partly because we knew of only a few toxins and were not able to detect these toxins in very low levels. Today, the list of carcinogens is long, and our growing ability to detect them in trace amounts means that carcinogens are seemingly ubiquitous in the environment. There is a growing consensus that outlawing them is not a satisfactory policy regime. The concept of dealing with risk in an open way and labeling hazards is hardly developed. We have little precedent. Most policy makers, producers, and food manufacturers are very uncomfortable with requiring or offering information about hazards on food products. It is almost a taboo (Harris, Padberg, and

We need better information on the identity of carcinogenic substances in food, the amounts present in food, and finally this information united with patterns of food consumption. Information on risks from food additives and chemical contamination reported by the news media have been found to affect food demand (Brown; Johnson; Shulstad and Stoevener; Smith et al.; Swartz and Strand; van Ravenswaay and Hoehn). The way we currently relate to food safety is inadequate. Consumer information about carcinogens—the area of greatest consumer anxiety-is particularly poorly handled. It is possible to translate information available to the science community to a form which is accessible and understandable to consumers. Policy arrangements are needed in which both consumers and industry can participate in hazard management. Alternative labeling systems will be a major undertaking, but may perhaps be very useful to beleaguered consumers and the food industry (Harris, Padberg, and Capps).

The research priorities of the USDA Joint Council on Food and Agricultural Sciences' Fiscal Year 1991 Priorities for Research, Extension, and Higher Education include the need for improved understanding of diet, nutrition, and health relationships, and better information on the safety and quality of the food

supply. These issues are highly ranked as priorities by the USDA's Program Plan for the National Initiative for Research on Agriculture, Food, and Environment, and by the Experiment Station Committee on Organization and Policy (ESCOP's) Research Agenda for the 1990s. The ESCOP report in particular ranks the safety and stability of consumer foods, and improved understanding of markets as top concerns. Knowledge about changes in food demand and consumer behavior is essential to developing effective food programs and policies.

Value Added in Food Processing and Distribution

Value added represents the creation of wealth distributed to the continued application of factors of production including capital, management, and labor. This perspective of value added allows the measurement of relative contributions of each of the parts of the food and fiber system to providing final products to consumers. In particular, the contribution of labor as a component of value added provides the link to the generation of employment opportunities and, consequently, either in direct or indirect fashion, taxable income. The contribution of capital provides the link to the development and adoption of technology in production, processing, and marketing.

Attention was directed to the issue of value added at a 1987 symposium sponsored by the American Agricultural Economics Association and at a 1987 conference sponsored by the Food Distribution Research Society. Christy and Connor, in an invited address to the SAEA given in 1989, described the economic forces influencing value-added food industries, drawing implications for southern agriculture. They also suggested an expanded role for land-grant supported research in food distribution and manufacturing. Many states have become increasingly interested in developing value-added industries in the agricultural arena as a means of fostering economic development.

Research is needed to implement empirical models to evaluate alternative value-added scenarios, including mathematical programming, input-output, and simulation models. In agreement with Ferris, solutions to the mathematical programming models could be used as standards by which to judge alternative value-added opportunities. However, because the food processing and distribution sector is characterized by many outputs and many inputs (see Heien for a complete set of cost and revenue accounts), it may be almost impossible to retrieve relevant data to support the analysis in particular cases.

Creation of value-added opportunities serves the dual purposes of improving the competitive position of agribusiness in individual states or regions and contributing directly to the economic health of states or regions. However, the assessment of opportunities in food and fiber processing and distribution is not a trivial task. Aspects of location analysis are inherently involved in the consideration of value-added activities. Several factors warrant consideration, namely, resource availability; markets (consumer and industrial, domestic and foreign); availability of processing, handling, and related technologies; and institutional (legal, organizational, and regulatory) or policy constraints. Attention directed toward these factors will lay the basis for appropriate private and public actions. Through coordinated action, opportunities may become reality (Capps, Fuller, and Nichols).

We, as agricultural economists, are in position to examine market potential and marketing strategies, underlying comparative advantages, and distribution channels; to conduct feasibility studies to demonstrate profitability; and to conduct benefit/cost analyses of alternative value-added opportunities. We also are in position to analyze key policy issues as well as the distribution of welfare gains and losses from the consumer level, the processing level, and the farm level. These efforts will assist those developing an agenda that maximizes returns to investments for value-added activities in food and fiber processing and distribution.

TEACHING AND EXTENSION OPPORTUNITIES

Colleges of Agriculture have opportunities to train both undergraduate and graduate students for careers in the food distribution industry. It is true that currently colleges of agriculture are in the process of developing agribusiness programs to stem declining enrollments. In fact, some departments have changed their titles to include the term agribusiness. Yet few colleges, especially in the South, prepare students for careers in food distribution and marketing. The only exception perhaps is the program at the University of Florida.

Polopolus stated nearly ten years ago in his AAEA Presidential Address that (p. 809), "what is lacking in most Masters and Ph.D. agricultural economics programs is a set of courses on managerial economics of firms beyond the farm gate. We need to take a serious look at what employers need and what special expertise we have to offer. If we fail to alter our graduate programs accordingly, agribusiness firms will increasingly shun traditional agricultural eco-

nomics Masters and Ph.D. degree holders in favor of business school products."

Two land grant universities well known for their programs in these areas are Cornell University and Michigan State University. Specific courses center on marketing management, food industry management, food merchandising, and public policy and the food system. Most departments which offer agribusiness curricula could probably accommodate courses in food distribution. Adrian, in fact, in his presidential address suggested an increased emphasis in the sales and marketing areas of agribusiness.

Health and nutrition concerns, food safety, and product labeling will be of increasing importance in the agribusiness and food complex. The development of value-adding activities beyond the farm gate has been recognized as an important component of the food and fiber industry. The importance of value-adding activities will increase in the future. Thus, there will be an increasing need for extension specialists to have a greater understanding of the needs of those engaged in the food distribution system. Extension efforts will be more demand driven than product driven. That is, efforts will be directed to developing programs which are more targeted to specific users such as food processors, wholesalers, and retailers.

If a faculty position were added to accommodate this area, Senauer contended, the person who fills it should have a marketing management orientation and preferably would have business experience in the food industry. Such a person could take a lead in developing contacts with firms in the industry, which would help open up employment opportunities in food distribution and marketing for our graduates and research opportunities for our profession. On this basis then, arguably the most likely type of appointment would be split between extension and research.

EMPLOYMENT OPPORTUNITIES

Polopolus speculated that in terms of future demand for professional agricultural economists, the corporate agribusiness world offers tremendous employment potential. Given the current limited opportunities in the public sector, whether at universities or at federal or state government agencies, the employment potential in the food distribution industry is quite appealing. Opportunities exist to gain practical experience through intern programs both for undergraduate and graduate students. Adrian reported that most colleges of agriculture in the South already provide some type of intern program, at least for undergraduates.

Studies conducted by the Department of Education and the Carnegie Foundation Commission recommended more active learning through internships. Beyond providing work experience, internships allow students to develop interpersonal skills, to apply what they have learned, and to understand better their appropriate career paths. Conner suggested that another alternative would be to encourage development of industry internship programs for professional agricultural economists similar to those commonly designed for students.

SERVICE OPPORTUNITIES

As discussed in previous sections, the industry connection can pay dividends both in terms of student recruitment as well as student employment. Likewise, colleges of agriculture can become service agencies for the food industry infrastructure. Schuh's article in *Choices* in 1986 dealing with revitalization of the land-grant system contended that a strong disciplinary focus was eroding allegiance for the land-grant concept. Schuh's remedy in part was to focus on applied work. The provision of service to the food distribution industry might then alleviate the concern expressed by Bonnen that most contemporary land-grant universities undervalue applied subject-matter and problem-solving research relative to disciplinary research.

With this focus on service, the industry connection possibly then can be viewed as a source of finance. Given the decline in federal and state budgets, the food distribution industry may offer funding opportunities. Of course, caution would need to be exercised to avoid turning colleges of agriculture into privately supported consulting firms, "Bromley's nightmare."

Industry members in turn could also play a pivotal role in helping to develop cooperative programs in food distribution and marketing. In agreement with Senauer, the ideas of well-placed business people frequently get more attention from university administrators than do suggestions from their own faculty.

MULTIDISCIPLINARY OPPORTUNITIES

Multidisciplinary opportunities among departments within colleges of agriculture are evident in the area of food distribution. To provide an integrated focus for needed initiatives in food safety, food science, nutrition, and marketing necessitates expertise in numerous fields rather than just in agricultural economics. Operationally though, a scheme must be in place to provide coordination and linkages across departments in colleges of agriculture and perhaps university system components (e.g., the business school). At Texas A&M, for example, we

are in the process of establishing an Institute of Food Science and Engineering under the auspices of the College of Agriculture and Life Sciences to provide a comprehensive focus on program areas in food distribution. This focus is to be accomplished by way of establishing four operating centers: a Center for Food Safety, a Center for Food Processing, a Center for Nutrition and Foods, and a Center for Food Marketing and Policy.

CONCLUDING REMARKS

The private-sector decision makers we usually cater to are farmers and ranchers as well as agribusiness firms (banking and investment firms, input firms, and commodity groups). But seemingly overlooked are those engaged in the food distribution industry. I argue that more emphasis should be placed on the food distribution industry, a heretofore untapped clientele of agricultural economists. I recognize that our profession cannot be all things to all people. But if the needs of the food distribution sector are not met by colleges of agriculture in general or by agricul-

tural economists in particular, these needs will be served by business schools.

Libby (p. 1) urges us to "go on the offensive, seek to anticipate problems and clients that will claim our attention, broaden ourselves as individuals and as land grant departments to be able to do something for somebody in the future." In this address, I have identified this body to be the food distribution industry. This industry will be useful in recruiting students, employing students, financing research work, and broadening our clientele base. As eloquently stated by Batie (pp. 1-2) "if colleges of agriculture are perceived as spokespersons or apologists for commercial agriculture, or if they cling to the mission of increasing production, they will be perceived as irrelevant to societal goals and thereby will be increasingly criticized, attacked, and underfunded." Establishing relationships with the food distribution industry will help us immeasurably with our image problem and will also help us to be more responsive to the needs of society.

REFERENCES

- Adrian, J. "Undergraduate Education in Departments of Agricultural Economics in the South: Status, Challenges, and Opportunities." So. J. Agr. Econ., 22.1 (1990): 1-9.
- Bacon, K., "U.S. Proposes Nutrition Labels." Wall Street Journal, 8 March 1990, B1.
- Bateman, L. "Agricultural Economics: A Fork in the Road or a Crooked Trail." So. J. Agr. Econ., 19.1 (1987): 1-5.
- Batie, S.S. "Agriculture as the Problem: New Agendas and New Opportunities." So. J. Agr. Econ., 20.1 (1988):
- Beattie, B.R. "Some Almost-Ideal Remedies for Healing Land Grant Universities." Am. J. Agr. Econ., (23.5 (1991):1307-1321.
- Bonnen, J.T. "A Century of Science in Agriculture: Lessons for Science Policy." Am. J. Agr. Econ., 68 (1986): 1063-1080.
- Borra, S.T. "A Healthy Diet with Animal Product Options: What the Food Marketer and Consumer are Doing." Food Marketing Institute, Washington, D.C. (mimeo), presented at the Intercollegiate Nutrition Consortium FAN Forum, University of Minnesota, St. Paul, MN, November 3, 1988.
- Bromley, D.W. "Re: Ed Schuh's 'Revitalizing Land Grant Universities'." *Choices*, First Quarter, 1986, pp. 6-16.
- Brown, D.J., and L.F. Schrader. "Cholesterol Information and Shell Egg Consumption." Am. J. Agr. Econ., 72.3 (1990): 548-555.
- Brown, J.D. "Effect of a Health Hazard Scare on Consumer Demand." Am. J. Agr. Econ., 51 (1969): 676-678.
- Capps, Jr. O., and J.D. Schmitz. "A Recognition of Health and Nutrition Factors in Demand Analysis." West. J. Agr. Econ., 16 (1991): 21-35.
- Capps, Jr. O., S.W. Fuller, and J.P. Nichols. "Assessing Opportunities in Food and Fiber Processing and Distribution." *Am. J. Agr. Econ.*, 70.2 (1988): 462-468.
- Christy, R.D., and J.M. Connor. "Economic Forces Influencing Value-Added Food Industries: Implications for Southern Agriculture." So. J. Agr. Econ., 21.1 (1989):13-22.
- Conner, J.R. "Observations on Changes in Factors Influencing Agricultural Economics and Some Implications for the Profession." So. J. Agr. Econ., 17.1 (1985): 1-6.

- Experiment Station Committee on Organization and Policy (ESCOP), Research Agenda for the 1990s, A Strategic Plan for the State Agricultural Experiment Stations and the Cooperative State Research Service. Washingtion, D. C.: 1991.
- Ferris, J.N. "State-Value-Added Activities as Related to Economic Efficiency." Organized symposium paper presented at AAEA annual meeting, East Lansing, MI, August 1987.
- Food Retailing Review. 1991 Edition, The Food Institute, Fair Lawn, NJ, January 1991.
- Harris, W.D., D.I. Padberg, and O. Capps, Jr. "Representing Food Safety on Product Labels in the Post-Delaney Era." *Choices*, Fourth Quarter, 1991, pp. 34-36.
- Havlicek, Jr., J. "The Southern Agricultural Economics Association: Past, Present, and Future." So. J. Agr. Econ., 16.1 (1984): 1-5.
- Heien, D.M. "Productivity in U.S. Food Processing and Distribution." Am J. Agr. Econ., 65 (1983): 297-302.
- Ikerd, J.D. "U.S. Agriculture at a Crossroads: Implications for Agricultural Economics." So. J. Agr. Econ., 18.1 (1986): 1-9.
- Ippolito, P.M., and A.D. Mathios. "Information Advertising and Health Choices: A Study of the Cereal Market." Washington, D. C.: Federal Trade Commission, April 1990.
- Johnson, F.R. "Economic Cost of Misinforming About Risk: The EDB Scare and the Media." *Risk Analysis*, 8 (1988): 261-269.
- Kinsey, J. "Working Wives and the Marginal Propensity to Consume Food Away From Home." Am. J. Agr. Econ., 65.1 (1983): 10-19.
- Lane, S. and C.G. Bruhn "Food Safety: Consumer Concerns and Consumer Behavior." Dept. Agr. and Res. Econ., Working Paper No. 593, University of California, Berkeley 1991.
- LeBovit, C. "Expenditure for Food Away From Home." Nat. Food Sit., 152 (1967): 36-38.
- Lenahan, R.J., J.A. Thomas, D.A. Taylor, D.L. Call, and D.I. Padberg. "Consumer Reaction to Nutrition Information on Food Product Labels." *Search*, 2.15, (1972) Cornell University.
- Libby, L.S. "Professional Diversity in Agricultural Economics: Salvation or Suicide?" So. J. Agr. Econ., 25.1 (1991): 1-14.
- Manchester, A.C. "Food Expenditures at a Glance." Nat. Food Rev., 13. 3 (1990): 25.
- McCracken, V.A., and J.A. Brandt. "Household Consumption of Food Away From Home: Total Expenditure and by Type of Food Facility." *Am J. Agr. Econ.*, 69.2 (1987): 274-284.
- _____. Analysis of Economic and Socio-Demographic Factors Affecting the Consumption of Food Away From Home. Purdue University Agricultural Experiment Station Bulletin No. 480, 1986.
- _____. The Value of Household Time and the Demand for Food Away From Home. Purdue University Agricultural Experiment Station Bulletin No. 485, 1986.
- National Research Council, Committee on Technological Options to Improve the Nutritional Attributes of Animal Products. *Designing Foods: Animal Product Options in the Marketplace*. Washington, D.C.: National Academy Press, 1988.
- Padberg, D.I. "Non-use Benefits of Mandatory Consumer Information Programs." J. Consumer Pol., 1 (1977): 5-14.
- Polopolus, L. "Agricultural Economics Beyond the Farm Gate." Am. J. Agr. Econ., 64.5 (1982): 803-810.
- Prochaska, F.J., and R.A. Schrimper. "Opportunity Cost of Time and Other Socioeconomic Effects on Away-From-Home Food Consumption." Am. J. Agr. Econ., 55.4 (1973): 595-603.
- Redman, B.J. "The Impact of Women's Time Allocation on Expenditure for Meals Away from Home and Prepared Foods." *Am. J. Agr. Econ.*, 62.2 (1980): 234-237.
- Scheuplein, R.J. "Perspectives on Toxicological Risk—An Example: Food Borne Carcinogenic Risk." *Progress in Predictive Toxicology*. D.B. Clayson, I.C. Munro, P. Shubik, and J.A. Swenberg, eds., 351-72. Elsevier Science Publishers, 1990.
- Schuh, G.E., "Revitalizing Land Grant Universities: It's Time to Regain Relevance." *Choices*, First Quarter 1986, pp. 6-10.
- Senauer, B. "The Effects of Demographic Shifts and Changes in the Income Distributions of Food-Away-From-Home Expenditure." *Am. J. Agr. Econ.*, 61.5 (1979): 1046-1057.

- Senauer, B. "Preparing Students for Careers in Food Distribution and Marketing: An Opportunity for Colleges of Agriculture." Invited paper presented at the 32nd Annual Conference of the Food Distribution Research Society, at Western Michigan University, Kalamazoo, MI, October 1991.
- Senauer, B., E. Asp, and J. Kinsey. Food Trends and the Changing Consumer. St. Paul, MI: Eagan Press, 1991.
- Shulstad, R.N., and H.H. Stoevener. "The Effects of Mercury Contamination in Pheasants on the Value of Pheasant Hunting in Oregon." *Land Econ.*, 54 (1978): 39-49.
- Smith, M.E., E.O. van Ravenswaay, and S.R. Thompson. "Sales Loss Determination in Food Contamination Incidents: An Application to Milk Bans in Hawaii." *Am. J. Agr. Econ.*, 70.3 (1988): 513-520.
- Swartz, D.G., and I.E. Strand. "Avoidance Costs Associated with Imperfect Information: The Case of Kepone." *Land Econ.*, 57 (1981): 139-150.
- Trapp, J.N. "The Dawning of the Age of Dynamic Theory: Its Implication for Agricultural Economics Research and Teaching." So. J. Agr. Econ., 21.1 (1989): 1-11.
- U.S. Department of Agriculture. Fiscal Year 1991 Priorities for Research, Extension, and Higher Education. Joint Council on Food and Agricultural Sciences, Washington, D. C., 1990.
- U.S. Department of Agriculture. 1992 Program Plan for the National Initiative for Research on Agriculture, Food, and Environment. Washington, D.C., February 1991.
- van Ravenswaay, E.O., and J.P. Hoehn. "The Impact of Health Risk on Food Demand: A Case Study of Alar and Apples." Dept. Agr. Econ., Staff Paper No. 90-31, Michigan State University, June 1990.