



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Research Updates

Food Insecurity in Low-Income Rural Areas

Eric Icart, University of Maryland Eastern Shore

Temporary shortage of adequate food for a proper diet (food insecurity) and inadequate access to full-line grocery stores and supermarkets are evident in many rural areas. To measure the severity of food insecurity and to determine food store accessibility in these areas, two methods of food security have been developed recently. The first method is the Food Consumer Survey (FCS) of USDA shopping module, while the second method is the Geographical Information System (GIS) developed by the Economic Research Service (ERS) of USDA.

The FCS model is a combination of the supplement to the April 1995 Current Population Survey (CPS) food security questionnaire and the FCS telephone survey of low-income households shopping module. The supplement to the CPS consists of 58 items grouped into four sections. Section I consists of a set of questionnaires on food shopping, Section II contains the questionnaire on food sufficiency, Section III has the questionnaire on mechanisms and food scarcity, and Section IV contains the questionnaire on concern about food sufficiency.

In the FCS model, an ordinal measurement scale applied across observed levels of severity was used to determine characteristics of different types of households. Bickel, Andrews, and Klein (1996), categorized populations as: Group A representing those households that are food secure; Group B consisting households that are somehow food insecure but show no signs of hunger; Group C contains those that are "hungry households," that is, at least one adult household member experiences hunger; and Group D represents households that have either children or adults experience hunger repeatedly.

The FCS model will help "identify those segments of the population most in need, assess the impacts of economic conditions and public programs, and monitor the success of efforts to reduce poverty-linked hunger" (Bickel, Andrews, and Klein, 1996). Since it provides the necessary information to identify those in need, the model might be of vital importance to academicians, nu-

trition professionals, and food policy makers throughout the nation.

In addition to the FCS model of food security, the ERS/USDA Geographical Information System (GIS) is useful to determine food store accessibility in rural areas. In many rural areas, low-income households are clearly at a disadvantage because of inadequate access to full line (number and type of products) grocery stores and supermarkets. Furthermore, they are affected by lack of transportation such as not owning a car, and little or nonexistence of public transportation. Also, these stores lack the variety of products that most full-line grocery stores and supermarkets offer and they charge higher prices for their products, particularly for perishable commodities. On the other hand, most full-line grocery stores and supermarkets tend to offer a greater selection of perishables and other healthful foods at lower prices as well as lower-cost alternatives to branded products. As a result, food policy makers and advocacy groups in those areas may want to know the extent to which these households are disadvantaged both economically and nutritionally by suboptimal access to food stores or supermarkets and the extent to which these areas are being overlooked by food retailers. To address these concerns, the GIS methods may be used to analyze rural zip codes and its adjacent accessible areas. Currently, the Lower Mississippi Delta region made use of GIS to seek relevant information on nutritional needs to improve diets and health, Kaufman (1997) reported on the initial findings of the project. These techniques combined may yield a better understanding of the level of food security in many regions as well as help identify areas at risk.

The above models are going to be used to study the problem of community food security in the Delmarva Peninsula (Delaware, Maryland and Virginia), to accomplish the following objectives: collect existing economic and demographic data and information on food assistance services to identify the group to be sampled; collect qualitative information about food assistance needs focus groups; conduct household food security and foodstore access surveys. The results are expected to: (1) help develop specific food security indica-

tors for the region, (2) provide organized data for use by other researchers, and institutions for the benefit of their community, (3) provide policy-makers in the Peninsula and the nation with key information pertaining to health and food security so that they can better assess the needs of individuals, and how they can be better served, (4) provide published results for use as outreach and education tools for rural communities throughout the nation.

Literature Cited

- Bickel, Gary, Andrews, Margaret and Bruce Klein, "Measuring Food Security in the United States: A Supplement to the CPS" ed. by Hall, Daryl and Mike Stavrianos, USDA/FCS, Alexandria, VA (January 1996).
- Kaufman, Phil. "Assessing the Extent and Causes of Supermarket Under-Capacity in Low-Income Rural Areas." *Journal of Food Distribution Research*, 28:1, (February, 1997):107-108.

New Shift in Food Distribution Orientation: The Proposition of Fresh Prepared Foods

John L. Park, Research Associate, Food Industry Management Program, Cornell University, 109 Warren Hall, Ithaca, NY 14853-7801

In recent years the food industry has been characterized by changes in the consumption, procurement, and preparation of food. The lines traditionally separating food at home and food away from home have blurred. Not only has there been a shift toward eating away from home, but food preparation has changed dramatically. We are fast approaching a time when a home meal preparer may never cook a meal from basic ingredients. Rather, "homemade" is being quickly replaced by "home assembled."

The retail environment has adjusted to the demands of time-hungry consumers. However, traditional foodservice operations have outperformed their grocery counterparts in tapping this emerging market. Only recently have supermarket operators become dedicated to the proposition of offering fresh prepared foods as a means of remaining a viable participant in a highly competitive industry.

This study surveys senior level executives from the supermarket industry about the activities and attitudes of their companies concerning fresh prepared foods. We find the industry to be highly dedicated to the use of fresh prepared foods in

their stores. On average, they expect fresh prepared foods to constitute 16% of total sales by the year 2000. Future sourcing of these items is expected to come more from central commissaries and local suppliers and less from current in-store production. Mechanisms for merchandising these products and indications of specific challenges are also provided.

Distribution Barriers Confronting Small-Volume Fruit and Vegetable Growers

John R. Brooker, David B. Eastwood, and Morgan D. Gray, Professors and Computer Analyst, Department of Agricultural Economics, The University of Tennessee-Knoxville

Market development is often dependent upon the simultaneity of expanding involvement of growers and buyers. A major difficulty in a state like Tennessee is that smaller-scale growers and inexperienced produce growers cannot readily gain access to commercial wholesale outlets. The volume, quality, packaging, and supply-time constraints of wholesale buyers prevent most of the relatively small-scale growers from gaining access to large-volume commercial wholesale outlets. Therefore, most experienced small-scale growers and other growers striving to become produce growers, are limited to the market outlets that accept smaller per delivery quantities and perhaps a broader range of quality. In an effort to help resolve market access barriers confronting fruit and vegetable growers in Tennessee, an assortment of facilities has been constructed during the past ten years. Between 1987 and 1995, federal, state, county, and city governments have contributed \$21 million toward construction of market outlets. While some arguments could be presented regarding the appropriateness of these investments, and whether the controlling politicians channeled the funds into the correct types of facilities and locations for fruit and vegetable outlets constructed, that is not the focus of this study. The funds have been spent, so the question now is how well these outlets are working and what might be done to facilitate greater success at these market outlets. However, perhaps it is relevant to at least note that investments did not follow a logical research-supported development plan, hence the diversity and location of the marketing facilities constructed.

The objectives of this study are to identify the characteristics of the shoppers that patronize direct-market outlets and to identify the fresh and processed food products these shoppers desire at farmers' markets. Characteristics of direct-market shoppers and the unique marketing stimuli (product, price, and promotion) may vary with the location, size, and amenities of each atypical farmers' market. Just as restaurants and food stores target particular segments of society for their products rather than trying to have general appeal to everyone, farmers' markets could identify the shopper segments who would be most likely to respond to the right combination of products and promotional efforts. Limited promotional budgets could then be spent with greater likelihood that the correct consumer groups are being reached for the respective market type. These targeted groups might vary with the type of market facility and location. For example, urban shoppers with access to a relatively expensive, upscale facility may need to be convinced that prices are lower than their neighborhood supermarket or that higher prices are acceptable because of the higher quality products. The product mix may include bulk, precut, and locally processed foods. Shoppers at rural locations, on the other hand, may be interested primarily in bulk produce for home canning. Market development entails overcoming the simultaneity of generating adequate supply at these markets to attract shoppers, or from the growers' perspective, having adequate numbers of shoppers to warrant growing crops for that outlet.

Six market outlets that emphasize retail direct marketing by growers to consumers were selected as the focal point of three surveys designed to collect marketing data. One survey targeted residents in the immediate area surrounding the market outlet. The second survey focused on shoppers visiting a particular market. The key emphasis in both surveys was the desire to gain insight into their fruit and vegetable shopping behavior. Striving to learn more about the shopping patterns of consumers is not new; however, what may be the unique contribution of this project is the opportunity to study the response of residents and shoppers associated with such diverse markets. Two of the metropolitan farmers' markets cost \$6 and \$7 million, respectively, and one is downtown and the other in a more suburban location. The farmers' markets in two other locations are older low-cost operations, of which one is seasonal and

the other is open year round. Another market is smaller with respect to facilities, but it is located in the rural part of the county with Tennessee's largest city. The sixth market is located in a smaller city and was part of a downtown revitalization project.

Mail-back questionnaires were sent to 1,000 households in each of the cities where the markets are located. Another 1,000 shoppers on each market were handed a mail-back questionnaire while they were visiting the farmers' market. Also, the perspective of the growers is being pursued via mail-back questionnaires distributed to every fruit and vegetable grower in the 40 counties contiguous to the six counties with the markets being examined.

Impact of Industry Concentration on Small and Medium Produce Distributors

Roger Hinson and Meredith Dowdall, Louisiana State University

Consumption of fresh fruit and vegetables has increased in recent years. U.S. per capita consumption of all fresh produce in 1996 was almost 441 pounds. Food industry retail sales increased by about 3.3% in 1996. Growth in sales of fresh produce typically has grown as fast as or has exceeded overall store sales. National promotion campaigns such as 5-a-day For Better Health and the health conscious consumer have led to these increases in consumption. Main produce items, such as lettuce, cucumbers, and apples that comprise the bulk of produce consumption have steadily grown in demand. Produce retailers have also met the demand for consumer's change in taste and preference by the widespread introduction and availability of new and specialty varieties such as blood oranges, kumquats, and shiitake mushrooms. Many distributors and regional produce processors offer customers customized fresh-cut and value-added products. Products featuring convenience will increase per capita consumption of fresh produce.

Increasing competition has emerged from various levels of produce distributors, from the wholesaler to the road-side stand. The seasonal nature of agricultural products suggests competitive pressures on sellers. Change in distribution channels and size of firms has led retail operators and suppliers to search for cost reductions and

profit enhancement methods. Distribution firms have looked for alternative ways to increase efficiency and minimize costs by adopting new techniques. The Efficient Consumer Response is an attempt to eliminate unneeded and redundant costs from grocery distribution channels. These changes have contributed to the increased degree of concentration in the fresh produce industry. Individual firms have grown larger by merging with other firms in the vertical marketing chain, and through partnering with retailers. These relationships between large firms demonstrate a common industry trend. Among medium and small companies, competition with these large firms and each other is intense and buyers become price-sensitive due to substitute products and substitute companies. The changes in industry concentration and the ECR initiative raise questions about the capability of smaller distribution firms' progress and viability.

The purpose of this study is to analyze the distribution system of the fresh produce industry. Our research objectives will be 1) to describe the impacts of the change in industry concentration on distribution firms of different sizes and 2) to analyze key characteristics of these distribution firms, and 3) to document competitive strategies they are adopting.

A market research survey will be distributed to the small and medium-sized distribution firms in the relevant market area. Data will be analyzed using a variety of descriptive and other quantitative procedures.

Location Determinants and Attraction-Retention-Expansion Factors of Georgia Food Processors

Forrest Stegelin and Jeffrey Dorfman, Center for Agribusiness and Economic Development, Department of Agricultural and Applied Economics, University of Georgia

This article examines the factors that influence the location choices of food and kindred products processors/manufacturers (SIC 20 and 21) in Georgia. Attraction-retention-expansion managerial considerations are also assessed. A five-point Likert Scale was used to ascertain the relative importance of numerous factors sorted into six categories: infrastructure, environmental policy/legislation, fiscal policy, market concerns,

labor and quality of life. Other information obtained in the mail survey included the type of food product(s) manufactured, number of employees, estimate of annual sales, target market location, and general business concerns. Of most importance to the 150 respondents (922 surveys distributed) are issues related to work force training, energy and utilities, environmental regulations or issues, human resource issues, and raw products and agribusiness development.

Background and Procedures

Food and kindred products processors are an important contributor to the Georgia agribusiness industry and to the Georgia economy for income and employment. Many of these businesses are also important in complementing commercial production agriculture by adding value to the raw agricultural commodities grown and raised in Georgia and making consumer-ready food products available for satisfying consumer needs. As communities seek opportunities for economic growth and diversification, food product manufacturers or processors are a logical consideration for adding employment and revenue to the local economy.

What factors are important in a firm's managerial decision to locate in Georgia, as well as stay in Georgia, and perhaps even expand operations in Georgia? Studies conducted in the Upper Midwest and the Mid-Atlantic States suggest that plant location choices are driven by market and infrastructure factors, while fiscal policies and development incentives are insignificant [Leistritz (1992); Lopez and Henderson (1989); Torok, Schroeder and Menkhous (1991)]. Are Georgia's food and kindred products processors significantly different in their outlook on Georgia as a place to do business?

Using the *Georgia Manufacturing Director 1996*, specifically those businesses cited under SIC 20 (food and kindred products) and SIC 21 (tobacco and related products), plus a supplemental list of FOODPAC participants supplied by Georgia Tech University, a survey was mailed to the 992 individual business addresses. The survey instrument was designed by the University of Georgia's Center for Agribusiness and Economic Development with input from the State of Georgia's Office of Planning and Budget. One hundred fifty (150) completed surveys were returned for the tabulation, after two separate mailings of the

survey. Of further note is that nearly 100 additional surveys were returned by the Post Office as non-deliverable (forwarding had expired, moved with no forwarding address, no longer doing business, incorrect address).

Food and kindred product processing: The representation of the food processors' primary interests or focus indicates meats and meat products were the leading category in the number of survey responses with 32, followed by poultry and poultry products (18), nuts, including pecans, walnuts and peanuts (13), and breads and bakery goods (12). Although fewer in number of responses, surveys were completed by businesses representing several other food product categories.

Infrastructure: On a five-point Likert Scale (range: 1 = unimportant to 5 = critical) indicating the relative importance of selected infrastructure factors in the decision to be located in Georgia, the average scores show there is minimal difference among many of the stated factors. In order of importance, the factors (and average scores) are:

✓ availability and quality of water	3.79
✓ cost of property and real estate	3.57
✓ availability and cost of electricity	3.53
✓ availability and cost of waste treatment and waste disposal facilities	3.35
✓ availability of ground transportation (truck and rail services)	3.30
✓ availability and cost of natural gas	3.25
✓ construction costs	3.24
✓ developable land available	3.23

For the factors of availability and quality of water, availability and cost of electricity, cost of property and real estate, and availability and cost of ground transportation, over half (greater than 50 percent) of the respondents indicated the relative importance to be either very important or critical. Of least concern were the availability and cost of air freight transportation services (1.89) and accessibility to ports and ocean freight (2.00). Only 11 percent and 12 percent, respectively, of the respondents indicated these two factors to be at least very important.

Environmental policy/legislation: Using the same five-point scale for factors pertaining to environmental policy issues and legislation, the more important factors (and average scores) are as follows:

✓ annual costs to comply with environmental regulations	3.39
✓ fairness of enforcement of environmental regulations	3.38
✓ ease and speed of compliance with environmental regulations	3.32
✓ existence of municipal sewers to handle water waste	3.27
✓ water waste disposal costs	3.27
✓ water pollution regulations	3.23

Only the first two factors mentioned above were indicated to be at least very important (either a 4 or a 5 on the five-point scale) by at least half of the respondents. The only factor to not score as important or higher is air pollution regulations with a 2.87, although 29 percent of the surveys had this factor marked as either very important or critical.

Fiscal policy: On the five-point Likert Scale, the fiscal policy factors of importance included the following:

✓ overall tax burden on business	3.70
✓ community attitude toward business development	3.55
✓ workers' compensation insurance	3.49
✓ sales tax exemptions on manufacturing and processing equipment	3.40
✓ unemployment insurance taxes	3.33
✓ state regulatory climate	3.33
✓ local property taxes	3.40

Those fiscal policy factors that were indicated to be either very important or critical in the decision to be located in Georgia by greater than half of the respondents included local property taxes, workers' compensation insurance, state tax exemptions on manufacturing and processing equipment, overall tax burden on the business, and the state regulatory climate. Of least importance were the availability of enterprise zones (2.74) and incentives for venture capital formation (2.82). About one-third of the respondents did, however, indicate these two issues to be either very important or critical, with the frequency count to be 31 percent and 34 percent, respectively.

Market concerns: Among nine market concerns delineated on the survey, only one factor scored less than important (less than 3.00) — state

marketing assistance programs, with an average score of 2.44 on the five-point scale of importance. One in five of the food processing firms responding to the survey did, however, indicate that this factor was either very important or critical.

The leading factors, in terms of importance in the decision to be located in Georgia, are:

✓ quality, availability and cost of labor	3.95
✓ quality and availability of transportation (cost and accessibility)	3.53
✓ proximity to markets	3.49
✓ environmental regulations/concerns	3.48
✓ business climate in Georgia	3.45

Quality, availability and cost of labor is viewed as exceedingly important to the decision to be located in Georgia, as 72 percent of the surveys reflected this issue to be either very important or critical. The other marketing factors that at least half of the respondents reported as at least very important include the proximity to markets, the quality and availability of transportation, the environmental regulations and concerns, and the business climate in Georgia.

Labor: The presence of unions scored the lowest (2.39 on the five-point scale) among labor factors influencing the decision to locate in Georgia, yet 29 percent of the surveys reflected this concern to be either very important or critical. The more important factors (and their scores) are:

✓ availability of labor	3.99
✓ labor productivity	3.97
✓ non-unionization of labor	3.86
✓ work ethics and attitude	3.84
✓ prevailing wage rates	3.71
✓ right to work laws	3.66

At least two-thirds of the food processor businesses valued the following labor factors as either very important or critical: availability of labor, labor productivity, prevailing wage rates, non-unionization of labor, work ethics and attitudes, and right to work laws.

General business concern prominence: Using a three-point scale (1 = not important, 2 = important, 3 = very important) to evaluate issues or problems that could impact a firm's performance, effectiveness and efficiency, those factors with a mean score exceeding 2.00 include:

✓ problems with government regulations (food safety, labeling, new products OSHA, EPA, FDA, ADA, IRS)	2.40
✓ labor problems	2.21

These factors are followed by:

✓ marketing problems (forecasting, increasing sales, pricing, merchandising, advertising and promotion)	1.99
✓ problems created by competitors	1.98
✓ problems associated with economic climate (local, state or regional economy)	1.93
✓ state taxes	1.90
✓ transportation problems	1.88
✓ finance problems (obtaining loans, interest rates, credit terms, cash flow)	1.86

Size of business: The criteria used for measurement of the size of a food processing business is the number of full-time employees. Of the respondents, 45% were small (1 – 19 full time employees), 26% were medium (20 – 99 full time employees) and 29% were large (100 or more full time employees).

Estimate of annual sales: Forty percent of the survey respondents reported annual sales of less than \$500,000. Eighteen percent reported sales exceeding \$20 million, while 29 percent cited annual sales between \$1/2 – \$7 million.

Destination of sales: In descending order, the destinations of the majority of the food products processed by each firm are: local; adjacent states; elsewhere in Georgia; international; and national. This suggests some niche markets are served with some niche food products processed by these Georgia food processors.

Quality of life: On a personal level, the respondent was requested to evaluate personal factors that may have affected his/her own decision to locate in Georgia. This, too, was using the five-point scale described earlier. The leading or more important factors appear to be:

✓ attractive place to live	3.66
✓ quality and cost of housing	3.55
✓ cost of living	3.52
✓ quality of medical care and facilities	3.44
✓ quality of schools (pre-K through 12)	3.42
✓ weather or climate	3.40

- ✓ quality and proximity to higher education (college, vocational/technical, continuing education) 3.38

Those factors which were valued as either very important or critical by at least 50 percent of the respondents include already a resident or doing business in Georgia, attractive place to live, cost of living, quality of medical care and facilities, quality and cost of housing, quality of schools (pre-K through 12), and quality and proximity of higher education.

Of least importance numerically are:

- ✓ diversity of business 2.88
- ✓ proximity to relatives or family 2.88
- ✓ proximity to cultural opportunities 2.90
- ✓ proximity to recreational activities 2.96

Between one-fourth and one-third of the respondents did, however, indicate that these four factors were either very important or critical in their personal decision to locate in Georgia.

Overall importance of factors in establishing food and kindred product processing in Georgia

Of most importance are the factors of workforce training, energy, environmental regulations and issues, human resource issues, and raw product and agribusiness development. Of least importance are the factors of research and technical assistance, food companies and trade associates, financial issues, food safety and technical affairs, and agricultural markets with production and packaging facilities.

Implications and Discussion: The analysis of location factors suggests that communities in Georgia likely will be more successful in economic development efforts to attract food processing businesses if the communities can tailor any assistance/incentives to address the specific needs of a particular candidate industry or firm. For example, food processors identify water supply and water treatment as very important location considerations, whereas these factors typically are less salient for some other types of agribusiness and/or general business. Incentive packages to attract food processors are more effective, so it seems, when focused on the provision of infrastructure and the availability of a qualified labor

force rather than focused on tax and development incentives or promotion and marketing programs.

To increase the likelihood of attracting and retaining food processing facilities in Georgia, suggestions include:

- invest in infrastructure, particularly in the availability and quality of water, waste water treatment, and solid waste facilities;
- establish an information resource that facilitates timely and accurate information on availability of potential processing sites and relevant environmental, tax and zoning regulations and procedures;
- strive for better cooperation of all governmental regulatory, inspection and assistance agencies; and
- encourage the sufficient availability of qualified labor.

The results also show that some policies targeted to attract food processing firms to Georgia are likely to be either unproductive or unappreciated. These efforts include: enhancing the availability of ports and ocean freight, increasing enterprise zones, providing additional state marketing assistance programs, and publicly advancing or promoting the unionization of labor.

Selected References

- Leistritz, F.L. 1992. "Agribusiness Firms: Location Determinants and Economic Consideration." *Agribusiness* 8(4):273-286.
- Lopez, R.A. and N.R. Henderson. 1989. "The Determinants of Location Choices of Food Processing Plants." *Agribusiness* 5(6):619-632.
- Torok, S.J., A. Schroeder, and D.J. Menkhaus. 1991. "Analysis of Problems and Barriers of Small Food and Kindred Product Processors." *Agribusiness* 7(4):311-325.

Farmgate to the Table Survey

Jeff Downey, Patrick J. Byrne, and Scott Christmas
The authors are respectively Graduate Research Assistant, Assistant Professor, Food and Resource Economics Department, University of Florida and YF&R Director, Florida Farm Bureau

Throughout the different levels, there has been considerable speculation with regard to trade margins in the food distribution system. This study will examine these margins for the state of Florida. Through the cooperation of the Florida

Farm Bureau, approximately 60 volunteers throughout the state will maintain retail price diaries for several commodities. These semi-monthly diaries will contain related information with regard to the supermarket chain, individual store characteristics, point of origin, and brand where appropriate. This information will be linked to Census information with respect to the metropolitan statistical area, income, and other demographics.

Through various sources, prices at the other levels of the food system will also be collected for the time periods. Additionally, cost indices will be developed for each level in order to improve the understanding of shifts in margin levels. Together, this information should provide an insightful look into the specifics of pricing in the system.

The main purpose of this study is to build understanding for the why's of the trade margins and not to measure undue market power. As firms consider vertical integration in both directions, these results should prove beneficial to their decision process by showing the level of the margin and the relative cost influences on the margin.

Conduct, Performance, and Structural Changes in the U.S. Agricultural Trucking Industry

Albert J. Allen, Jeanne Reeves, and Kenya Thomas,
Department of Agricultural Economics, Mississippi
State University, Mississippi State, Mississippi

Introduction: Logistics is concerned with two major activities: storage and transportation. Inputs (seeds), commodities (wheat), and products (breakfast cereals) must be in and/or on the storage and/or transportation facilities before they reach the ultimate consumer or end user.

The storage activity is concerned with the number, size, design, type, and location of storage areas or warehouses, as well as appropriate order sizes, reorder points, stocking locations, and other inventory matters (Coyle, et al). The transportation activity involves the movement of various agricultural and food products. Movement requires the selection and use of a transportation mode or modes, based upon criteria that are ultimately determined by an agribusiness firm's consumers or end users (Coyle, et al). In addition, logistics is concerned with the cost of maintaining, operating, and improving these facilities so that customers of agribusiness firms can be served

at reasonable prices. Although the storage and transportation are important in the effective and efficient operation of the logistics system, this study will be limited to the transportation activity in general, and specifically the agricultural trucking industry in the United States.

One of the ways to evaluate the agricultural trucking industry in the U.S. is the use of the Structure, Conduct, and Performance (SCP) Model. According to this model, the way in which firms are organized in a market (structure) tells a great deal about how they make decisions (conduct), which in turn changes the level of efficiency and fairness present in the market (performance) (Seperich, et al). The structure, conduct, and performance of the agricultural trucking can play an important role in the structure, conduct, and performance of the marketing channels that provide food and fiber products and services to customers and final consumers. Therefore, it is important that managers and owners of agribusiness firms assess the structure, conduct, and performance of the agricultural trucking firms that serve them.

Objectives: The general objective of this study will be to determine the structure, conduct, and performance of the trucking firms that haul agricultural commodities and refrigerated food products in the U.S. using selected variables. Specific objectives are to:

1. Identify and inventory a set of variables that can be used to measure the conduct, performance, and structure of the U.S. agricultural trucking industry.
2. Determine the changes in the structure, conduct, and performance of the agricultural commodities and refrigerated food products haulers in the U.S. and by specified regions using the variables identified and inventories in Objective 1 for time periods 1992 and 1997.
3. Test the hypothesis that significant differences exist in the variables used to analyze the structure, conduct, and performance of the industry during the selected time frame.

Methods and Procedures: To accomplish Objective 1, information will be obtained from personal contacts and secondary sources. Objective 2 will be accomplished by using data from the *TTS Blue Book of Trucking Companies* for the

years 1992 and 1997 (or the most recent year available). Statistical means will be used to test the hypothesis for Objective 3. For accomplishing this objective, the agricultural commodity haulers and the refrigerated food products haulers will be tested separately. Then the two groups will be tested together to determine if any significant differences exist in the variables used to evaluate the structure, conduct, and performance during the time periods. In addition, econometric models will be developed to determine which variables have impacted the structure, conduct, and performance of the U.S. trucking firms that hauled agricultural and refrigerated food products during the study period.

References

- Coyle, John J., Edward J. Bardi, and C. John Langley, Jr., *The Management of Business Logistics* 5th Edition, West Publishing Company, New York, 1992.
- Lambert, Douglas M. and James R. Stork, *Strategic Logistics Management*, Third Edition, Irwin, Homewood, IL, 1993.
- Seperich, George J., Michael W. Woolverton, and James G. Beierlein, *Introduction to Agribusiness Marketing, Prentice Hall Career and Technology*, Englewood Cliffs, New Jersey.
- TTS *Blue Book of Trucking Companies*, 1993-94, Transportation Technical Services, Inc., New York, NY, 1993.

Developing the Organizational Structure of a Horticultural Marketing Cooperative

Paul S. Trupo, Charles W. Coale, George W. Norton and Dixie Reaves, Virginia Polytechnic Institute

Objectives: The overall objective is to develop an organizational structure that addresses informational and transaction cost issues that have often lead to internal decision-making problems that frequently arise in horticultural cooperatives. Specifically this research will:

- 1) Identify critical factors that contribute to a marketing cooperative's ability to sustain long-term growth.
- 2) Develop an organizational structure including a business plan, marketing strategy, marketing agreement, and job descriptions that address the critical factors identified above.

Justification: The nature of agricultural production in the smaller production regions of the southeastern United States and Appalachian areas is characterized by a large number of small family

operated farms. Due to the large portion of land dedicated to national forest, the hilly terrain, and the limited irrigation potential, horticultural producers are dispersed and restricted in the acreage they can produce. In order for these growers to expand horticultural production and market their produce through the leading supermarket retailers, they must band together to share costs and risk while striving to meet the strict market requirements demanded by these retailers.

The transaction costs of communicating, organizing, and coordinating these dispersed, small growers have often lead to informational problems that contribute to a failure to meet industry marketing and quality standards. As produce flows from farm to supermarket shelf, a corresponding stream of information must flow from the consumer back through the marketing channel to be incorporated into the growers' production and post-harvest handling technologies.

The inability of any horticultural cooperatives to produce a product that meets strict industry standards prohibits co-op members from obtaining a high price for their produce. This study proposes an organizational structure with specific job descriptions, business plan, and marketing agreements that considers the importance of information flow and the transmission of marketing standards from consumer preferences to production technology.

Procedure: In order to achieve the above objectives, surveys and interviews were conducted with growers, extension agents, produce purchasers, marketing specialists, and with management from both successful and failed cooperative efforts. The identification of critical factors was used to propose a more efficient organizational structure.

To Market...To Market...Seven Steps to a Marketing Plan for Horticultural Products

Karen P. Mundy, Charles W. Coale, Jr., Susan B. Sterrett, Virginia Polytechnic Institute

Farmers frequently ask university researchers and extension agents if this fruit or that vegetable will grow in their area. Generally, the response is positive followed by the question, "How do you plan to market it?" At this question, farmers shrug their shoulders, shake their heads, and leave. The crop is not planted and farmers remain price tak-

ers. They are uncomfortable with marketing and, because of their discomfort, view it as less important than production and financial management. Marketing, however, is just as much part of the overall management of an operation as production and finance are.

This report was written in response to the need to provide farmers with a step-by-step procedure to follow to develop a marketing plan. It is based on secondary research in marketing and post-harvest physiology and on personal experience with retail farm markets. The intended audience is farmers or extension agents or other people leading workshops on marketing horticultural products. The information can be used at both wholesale as well as retail level, albeit the emphasis is on the retail level since there is more latitude for creativity and alternatives.

Seven steps are outlined and expanded upon for the development of the marketing plan:

1. Set goals, objectives, and plans,
2. Identify customers and their needs,
3. Decide on market outlets,
4. Attract customers,
5. Price products realistically,
6. Evaluate the plan, and
7. Revise the plan.

Throughout the manuscript, a fictitious family and their relatives — the Solanum Tuberosums — are used to illustrate the steps. The emphasis is on using existing resources effectively and efficiently, being creative in planning, using multiple methods, being flexible, and keeping things as simple as possible. It encourages farmers to work together to supplement products or personnel and personal strengths or both. It notes areas that farmers need to be aware of, such as zoning, listening to neighbors, dress codes, health regulations, handicap access, post-harvest handling, and the trade-offs of certain product mixes.

There is a resources list at the end as well as an extensive bibliography.

Consumer Attitude Towards State Promotional Programs: The Case of Jersey Fresh

Ramu Govindasamy, Assistant Professor and Marketing Specialist, and Aruna Pingali, Graduate Assistant, Department of Agricultural Economics and Marketing, Cook College, Rutgers University

The Jersey Fresh Program launched by the New Jersey Department of Agriculture aims to promote sales of New Jersey fresh produce among consumers. The purpose of this study was to evaluate the effectiveness of the Jersey Fresh logo in terms of awareness among consumers. The results indicate that 77.5% of the respondents were aware of Jersey Fresh. Compared to other fresh produce 69.3% and 73% indicated that Jersey Fresh produce is very good in terms of quality and freshness, respectively. In terms of price and package, 46.1% and 57.9%, respectively, thought that Jersey Fresh is the same as other fresh produce.

Marketing of Whole Florida Bay Scallops

Robert L. Degner, University of Florida

Objectives: To determine market acceptability and marketing strategies for whole bay scallops produced in aquacultural environments.

Background and Procedure: Because of intensive harvesting and environmental pollution, commercial harvest of the Florida bay scallop has been banned. Bay scallop aquaculture research indicates that commercial production may be feasible in locales with satisfactory water quality. Traditionally, American consumers have only eaten the white fleshed, succulent adductor muscle of scallops. The small size of this muscle in Florida bay scallops makes aquaculture production for the muscle only economically impractical. Consumer evaluations of aquacultured whole bay scallops were obtained in conjunction with a restaurant sales test which began in September of 1997 and will conclude in late 1998.

Preliminary Results: During the abbreviated 1997 scallop production season, four upscale, white tablecloth restaurants received limited weekly supplies of scallops approximately 35 to 50mm in diameter. They were cooked whole, in-shell and served to patrons as appetizers or as entree items and sold at prevailing menu prices. Af-

ter they had eaten, patrons ordering whole bay scallops were asked to evaluate basic product attributes and indicate their level of satisfaction with the product using a series of rating scales. They were also asked for their repurchase intentions. Preliminary results were very favorable. Nearly 90 percent of all respondents indicated a willingness to buy whole bay scallops again. Additional consumer evaluations will be obtained in 1998.

Business Problems and Management Assistance Needs Among Georgia Food Service

Forrest Stegelin, Department of Agricultural and Applied Economics, University of Georgia

Researchers have long argued that a major gap exists between the management assistance needs of food service providers and the available information and services. This paper provides survey results that identify specific management assistance needs of food service managers and outlines unique serious business problems faced by food service providers in Georgia. The survey included specific problems and barriers faced by the firm, indicating the extent to which an item was a problem in their food business, so that strategies and technical assistance resources could be recommended to reduce particular problems. Thirty problems/needs were presented to the respondents. The perceived serious business problems and critical assistance needs can be classified into five areas: accounting, marketing, labor, sources of capital, and technology. As to any impediments experienced in obtaining management assistance, the leading responses were: accessibility, cost, timeliness, and availability.

Background: Increasing management education is the most frequent suggestion for reducing business failure as a result of the perceived chasm between the management assistance needs of retailers and the available information and services. Nine reasons have been cited for this gap or chasm [Torok, Menkhaus, and Schroeder (1991)]. First, business management must recognize that there is a problem. Second, managers have to admit they lack the expertise to solve a problem and then make the decision. Third, retail managers claim that they simply lack the time to utilize management assistance services. Fourth, managers with exogenous problems (weather, markets,

legislation, suppliers, competition, etc.) feel these problems are beyond their control with little to gain by seeking management assistance. Fifth, some managers disdain government interference associated with government services. Sixth, recommendations of management assistance services are too risky or too costly. Seventh, management assistance services that require minimal effort to employ are more likely to be used. Eighth, face-to-face sources of management assistance are preferred to impersonal sources. Ninth, managers (of retail businesses) may not be provided with the kinds of management assistance they need.

So as to better understand the needs of food service retailers, some recognition of their problems must exist. Several authors, including Torok and Schroeder (1992), have suggested that the food, fiber and agribusiness complex is unique within the business world. For example, Sonka and Hudson (1989) claim the food and agribusiness sector is particularly affected by factors such as (1) unique cultural, institutional, and political aspects of food, (2) biological uncertainties faced by production agriculture, (3) alternative goals and forms of political intervention across subsectors and between cultures, (4) reliance on the public sector for technology development, and (5) varying levels of competition both within and among food and agribusiness sectors.

The objectives of this paper are to provide survey results that identify unique, yet serious business problems faced by food service retailers in Georgia, and to identify technical assistance needs of food marketers, including managerial policy implications and caveats. Personal (telephone and face-to-face) interviews were conducted during the fall-to-spring months of 1996-1997 of 120 food service businesses (restaurants, drive-through, carry-out, delicatessens, fast food, cafes, etc.) located in rural areas and small towns of Georgia. The survey inquired of specific problems and barriers faced by the firm, and an indication of the extent to which an item was a problem for their retail food service business. The survey also asked the respondent to identify any technical assistance needs the business faced, such that strategies and technical assistance resources could be recommended to reduce particular problems.

Results and Discussion: Thirty (30) potential problems and needs were presented to the respondents. Because the focus was on detrimental is-

sues, the responding firms were expected to have few serious business problems so that the number of observations as a "serious problem" was likely to be low. As sample size decreases, the results of common statistical tests, such as the chi-square test of independence and Fisher's exact test of independence, become nullified. Therefore, a mean (average) score was calculated for the most frequently acknowledged problems or needs using a five-point Likert Scale ranging from 1 = "of no consequence in our operations" to 5 = "has a significant negative impact and likely to put us out of business."

The perceived serious business problems and critical technical assistance needs can be classified into five areas: accounting; labor; marketing; sources of capital; and technology. The mean scores for the more prominent problems/needs are annotated in the accompanying table.

Food service retailers appear concerned with basic accounting and bookkeeping, especially the ability to problem solve and make decisions using managerial accounting. This may indicate the relatively thin or small margins within which they operate (high costs associated with extensive menus and perishable products).

Labor problems are more societal in nature than economic as the costs associated with wages and benefits scored lower than getting and retaining good employees and the communications between employees and employers (management). A retail food service business is a labor intensive business with customer-employee contact responsible for many sales, thereby explaining this observation.

Personal selling techniques follow as a logical marketing need. Having a documented business or marketing plan appears as another problem while many general marketing topics also surfaced as issues. As a retail operation, these observations are consistent with marketing problems or managerial needs among other rural or limited market area businesses.

Although the concept of new technology for a food service retailer may be questionable by some individuals, there have been new food preparation and food safety technologies and new retail customer service technologies employed. An apparent lack of available information on new technologies as well as implementable technologies, plus the seemingly high costs of adoption (and even costs of non-compliance of health, nu-

trition, and disability regulations) are deemed problems.

Table 1. Identification of the Relative Seriousness of Business Problems Faced by Food Service Marketers in Rural and Small Town Georgia, 1996-1997.

Business Problem or Technical Assistance Need	Mean Score
<i>Accounting</i>	
maintaining business records	3.3
preparing financial statements	3.1
analyzing financial statements	3.9
preparing tax statements	3.0
<i>Labor</i>	
finding qualified employees	3.4
motivating and keeping good employees	4.1
high wages and salaries	3.2
benefits package costs	3.8
employee-management communications	3.6
<i>Marketing</i>	
business and marketing plans	3.7
inventory control	3.3
advertising strategy	3.3
increasing and/or maintaining sales	3.5
merchandising and image conveyance	3.2
salesmanship techniques	3.4
<i>Sources of Credit</i>	
obtaining lines of credit or operating loans	3.4
financing new technology	3.5
<i>Technology</i>	
costs of new technology	3.5
lack of information on new technologies	3.3
no local supply of new technology	3.2

Implications and Observations: These empirical observations have implications for technical assistance providers to food service businesses. First, sporadic responses (the low number of observations) for each of the thirty problems and needs suggest that any educational efforts will have to be targeted one-on-one to be successful, as the uniqueness and variability among food businesses does not lead to a single marketing-management prescription. Second, issues not of a legal or regulatory nature are more likely to be effective than those where stringent penalties for error or non-compliance exist. Third, the overall scores for the problems cited in the labor category were the highest among the five delineations (accounting, labor, marketing, capital and technology) representing a major concern as labor effectiveness and efficiency affects both marketing results and financial statement results. Fourth, the small sample size may not truly repre-

sent the presence nor severity of business problem areas among food service firms in Georgia for suggestions and strategies for technical and educational assistance to be successful.

Selected References

- Sonka, S.T. and M.A. Hudson. 1989. "Why Agribusiness Anyway?" *Agribusiness* 5(4):305-314 (May 1989).
- Torok, S.J., D.J. Menkhaus, and A. Schroeder. 1991. "Management Assistance Needs of Small Food and Kindred Products Processors." *Agribusiness* 7(5):447-462 (September 1991).
- Torok, S.J. and A. Schroeder. 1992. "A Comparison of Problems and Technical Assistance Needs of Small Agribusiness and Nonagribusiness Firms." *Agribusiness* 8(3):199-217 (May 1992).

The Produce Sales Predictor for Small Food Retailers: A Case Study

J. Richard Bacon, Ulrich C. Toensmeyer,
Department of Food & Resource Economics,
University of Delaware, and Charles Goulston,
AMS, USDA

Introduction and Justification: Small independent food retailers do not always have the skills to fully utilize the data base generated in their market(s). Especially now that scanner data is available even for the small independents. This study attempts to show how scanner data could be utilized and linked together for inventory control, physical distribution and demand analysis. Retailers could make use of the elasticities to determine their delivery scheduling and inventory control program, space allocation, and develop sales management models to control physical distribution. Thus we have developed "The Produce Sales Predictor" (copyrighted work).

Objectives: The overall objective was to develop a fresh produce delivery schedule based on consumer buying patterns and inventory control procedures utilizing data obtained through scanners in selected markets in Delaware. Specific objectives were as follows:

1. Determine consumer buying patterns of selected produce items and assess the impact of prices and delivery scheduling
2. Determine the use of available data sets such as scanner data for decision making regarding delivery schedules and inventory control.
3. Develop a program and manual to be utilized by small food retailers.

Procedures: We utilized Microsoft-Excel 5.0 program as a base for our model. The program is now complete and a manual has been published.

Using Scanner Data to Examine Consumers' Purchase Decisions

Eugene Jones, The Ohio State University

Researchers who have analyzed the food shopping behavior of American consumers have concluded that both lower- and higher-income consumers are relatively unresponsive to price changes. A 1996 AJAE study concludes that consumers reduce their consumption of breakfast cereals by one-tenth of 1% for each 1% increase in breakfast cereal prices. But just how meaningful is this information? Do consumers purchase breakfast cereals, or brands of cereals? Do Kelloggs and General Mills produce breakfast cereals, or brands of cereals? Further, why have all major breakfast cereal firms cut prices by as much as 20% over the past three years if consumers are unresponsive to price changes? Studies conducted by this researcher, using supermarket scanner data for the Columbus, Ohio area, suggest that other researchers have "aggregated" away many of the important choices consumers make in their shopping decisions.

To date, supermarket scanner data for breakfast cereals, a group of carbohydrates, and fluid milk, show major differences in the purchasing behavior of lower- and higher income groups. A consumer's response to product price changes appears to be a function of relative product prices and the overall importance of particular products in one's diet. For example, consumers have been shown to be far more responsive to price changes for the relatively higher-priced top ten brands of breakfast cereals than they are to price changes for the reasonably lower-priced dried potatoes. Indeed results for five product classes of breakfast cereals — private label, top ten brands, other brands, hot cereals, and snack cereals — show all consumers to be at least five times, and lower-income consumers to be at least twelve times, as responsive to price changes as the response rates reported in a 1996 study using NFCS data.

Analyses for a group of carbohydrates consisting of dried, fresh, and frozen potatoes, pasta, and rice, show lower-income consumers to be more price responsive. These differences, how-

ever, are not always revealed by typical measures of price sensitivity. They are best discerned by segmenting the products into meaningful product classes such as private label and national brands and then comparing the percentages purchased and unit prices paid within these product classes. For example, as measured in quantities, private label potatoes represented 42% of lower-income shoppers' frozen potato purchases, as compared to 26% of higher-income shoppers' purchases. Higher-income shoppers paid an average of 4.7 cents per ounce for private label potatoes, as compared to 4.4 cents paid by lower-income shoppers. Such results show that lower-income shoppers are not only frequent purchasers from lower-priced product categories, but they also purchase the lower-priced products from within categories. Similar observations exist for pasta, rice, and dried potatoes.

Analyses of milk were conducted on the basis of milk type: skim, ½%, 1%, 2%, and whole. Product prices for all milk types were practically identical. However, lower-income consumers purchased three times as much whole milk as that purchased by higher-income consumers. Higher-income consumers purchased three to four times as much ½%, 1%, and skim milk as that purchased by lower-income consumers. All consumers purchased approximately the same amount of 2% milk. Rural residents purchased milk types which closely approximated purchasing percentages for lower-income consumers. These milk purchases suggest very poor diets for rural and lower-income Americans. But, such purchasing behavior may result from an income constraint which forces consumers to look for cheap sources of calories and fat.

Although scanner data has allowed this researcher to gain more insights into consumers' purchase decisions than what is generally possible with aggregated and cross-sectional data such as Nationwide Food Consumption Survey data, many unknowns still exist. Thus, the purchasing behavior of consumers for many other products continues to be analyzed.

A Case Study of Food Shoppers' Reaction to a Supermarket Merger/Acquisition

David B. Eastwood, Professor, Department of Agricultural Economics and Rural Sociology, The University of Tennessee, Knoxville

Mergers within the food retailing industry occur on a regular basis. For example, in 1994 and 1995 the numbers of mergers were 60 and 42, respectively. How do food shoppers react to these changes? Analysis of customer counts at stores involved in the mergers can provide some perspective. The proposed update is a case study of a merger that involves the acquisition of a regional chain by a larger operator that had no presence in the area. Two significant changes took place. One is the name of the stores changed. Second, the private label foods were replaced not only with new labels, but the processors were changed.

Customer counts refers to the number of times cash register drawers open. A week is the unit of measurement used in this study. By adding across days of the week, the "noise" of daily patterns is eliminated. Most promotions and pricing are for seven-day periods. Consumers' planning horizons for food shopping is consistent with a week.

The data begin with the week ending July 31, 1993 and continue through September 13, 1997. The merger acquisition became effective with the week ending June 6, 1995. Consequently, approximately two years of data are available prior to and following the merger acquisition. Five outlets are included in the study. All are located in average to above average income neighborhoods. Patronage at each outlet will be evaluated, as well as for the combined stores.

Average customer counts varied somewhat by store for the entire period and within each subgroup. More importantly, average customer counts before the merger were uniformly higher prior to the merger vis-à-vis post merger. The differences in store averages ranged from 658 to 2,524, with an average decline of 1,625. All pairwise correlations are positive and generally over 50 percent.

Plots of the customer counts by week reveal similar downward long-run trends with week-to-week fluctuations around the trends. There is a small step, indicating an increase in the number of weekly customers, immediately following the

takeover of approximately 3,300, or 666 per store. The increase lasted roughly one month, and then, the long-run decline resumed.

These results suggest that the acquisition did not reverse the long-run decline in patronage that was occurring prior to the merger. Although there was a slight increase right after the event, customer counts continued their downward trend. An implication is that mergers/acquisitions by themselves may not be sufficient to address food shopper perceptions of outlets. Additional marketing/promotion efforts need to be implemented to encourage current patrons to continue shopping, capitalize on a curiosity factor reflected in increases in customers, and attract new food shoppers.

Consumer Perceptions of Farmers' Markets: A Case Study

M. D. Gray, J. R. Brooker, D. B. Eastwood,
Department of Agricultural Economics and Rural
Sociology, The University of Tennessee, Knoxville

One of the ways in which locally grown produce can be made available to consumers is through farmers' markets. However, development of these outlets is a complex process, dependent to a significant degree on the simultaneity of the interaction between buyers and sellers. Markets become established and expand as growers provide adequate supply, but in order for growers to do so, they must have the expectation of being able to sell their production. A complicating factor is the absence of a single type of farmers' market. Rather, they range in size, extent of community involvement, and physical facilities.

A research project recently begun at the Tennessee Agricultural Experiment Station, and partially funded by the USDA/AMS, focuses on demand and supply considerations that impact market development. With respect to demand, a starting point is to gather data about consumers' attitudes, behaviors, and purchases at farmers' markets. Six locations across the state are included to allow for different types of markets. They range from a parking lot with a canopy open only during the harvest season to year round permanent facilities that have received local, state, and federal support. Two surveys are underway for each. One is a patron survey distributed to food shoppers at the various sites. The other is a

mail survey sent to random samples of households within a 15-mile radius of each facility.

The focus of this update is on the mail survey. Producing a truly random survey from six different areas of the state where no specific mailing list exists was the initial problem of the mail survey. The sample in each of the six cases must be drawn from more than one political area. Some samples came from a combination of city and county residents, some samples came from multiple counties, and other samples were to be drawn from a combination of city, county, and different states.

A program and electronic file of names and addresses were purchased from ProCD. The purchased program allowed for the selection of names and addresses in the desired radius of each market and for the export of these names and addresses to an electronic database file. Once the database for each of the six markets had been created and the appropriate sample size determined, the random selection of names could take place. Importing the database file into a statistical package, SAS, and creating a computer routine that overlaid a univariate distribution was the next step. This now gave each address an equal chance of selection. Thus, a truly random sample could be selected from each of the six database files. Names and addresses now could be written to a wordprocessor file for inclusion on cover letters and envelopes.

Returns of the mail survey indicate that on the average 14 percent of the names and addresses were undeliverable. This value of undeliverable addresses ranged from 11 percent to 22 percent.

Marketing Specialty Food and Drink on the Internet

**Gregory K. White, Department of Resource
Economics & Policy, University of Maine**

The number of businesses marketing specialty food and drink products on the Internet has increased from approximately 100 in October, 1995 to 5700 in September, 1997. While this marketing medium is still in its early phases of development, it appears to have significant potential. Forrester Research projects that total on-line food sales will reach \$336 million by the year 2000. Our recent research has continued to examine the demographics of Internet users who visit food and

drink sites and identify the site and consumer characteristics which contribute to the likelihood of making an on-line purchase.

The consumers visiting food and drink sites represent a prime market sector for specialty food firms. They are predominantly women with high educational levels and high incomes. Twelve percent of those who visited sites in 1997 had made an on-line food or drink purchase within the previous six months. The decision to purchase specialty food and/or drink products on-line appears to be similar to catalog buying. Those respondents who had bought food and/or drink by catalog in the previous six months were as much as 10 times more likely to have bought food and drink products on-line. The products most frequently purchased on-line were also similar to those most often purchased by catalog. These products differ significantly from the specialty food and drink items purchased most frequently in a retail store.

Recent surveys also examined the extent to which web site design affected the potential for on-line sales. Respondents were asked to evaluate selected sites and identify the likelihood, if any, that they would make a purchase from that site. They were also asked to review a list of descriptive words and select those which they thought applied to the site being evaluated. Respondents were more likely to make purchases from sites which were described as "innovative," "fun," "personal," and "useful." Sites which were described as "confusing" or "impersonal" were significantly lower in their likelihood of generating a sale.

Plans to extend this research include a mail survey of specialty food catalog buyers, a post-purchase survey of on-line buyers to determine factors which contributed to making the decision for the just completed transaction, a demographic survey for 1998, and further research into effective site design characteristics.

Preliminary Findings of Strategies Followed by Past Winners of the Malcolm Baldrige National Quality Award

Robert R. Cangemi and Raymond H. Lopez, Pace University, Lubin School of Business, White Plains, New York

Since the inception of the Malcolm Baldrige National Quality Award in 1988 there have been 28 winners. These companies represent U.S. companies who are recognized for business excellence and quality achievement. Awards may be given in each of three eligibility categories: manufacturing companies; service companies; and small businesses. This study is investigating the quality strategies followed by these Baldrige winners and the findings are being communicated to the food industry which, to this date, has not had a winner. It is anticipated that this sharing of information about successful performance strategies will benefit companies in the food industry.¹ The first part of this study investigated the seven service sector winners: AT&T Consumer Communications Services; AT&T Universal Card; FedEx Co.; GTE Directories Corp.; Customer Research Inc.; Dana Commercial Corp.; and Ritz-Carlton Hotel Co. (Work is continuing to investigate the other sector winners.) Each of these companies' Baldrige application summary was perused to determine the frequency that each of the eleven core values was mentioned in each of the seven award criteria. There were 247 citations of core values and concepts that were counted among the seven award criteria.² In descending order the percentages in which they were mentioned are as follows:

- | | |
|--|-------|
| • Employment Participation and Development | 16.2% |
| • Customer Driven Quality | 12.9 |
| • Long-Range View of the Future | 9.7 |
| • Partnership Development | 9.7 |
| • Continuous Improvement | 8.9 |
| • Management by Fact | 8.9 |

¹ Cangemi, Robert R. and Lopez, Raymond H., "A Research Proposal: An Investigation of Quality Strategies Followed by Past Winners of the Malcolm Baldrige National Quality Award and Their Application to the Food Industry," *Journal of Food Distribution and Research*, Vol. XXVIII, No. 1, February 1997, 108-109.

² Malcolm Baldrige National Quality Award. 1996 Award Criteria.

- Design Quality and Prevention 8.1
- Leadership 7.7
- Corporate Responsibility and
Citizenship 7.7
- Results Orientation 6.1
- Fast Response 4.1

These preliminary findings indicate that Baldrige service company winners expend their greatest effort in managing their human resource asset and their relationships with their customers.
