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## MAJOR CONSUMER TRENDS AFFECTING THE U.S. FOOD SYSTEM

by

Benjamin Senauer  
University of Minnesota



**Department of Agricultural and Applied Economics**

University of Minnesota  
Institute of Agriculture, Forestry and Home Economics  
St. Paul, Minnesota 55108

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**MAJOR CONSUMER TRENDS AFFECTING THE  
U.S. FOOD SYSTEM**

The food system links farmers and consumers; produces, moves, stores, and transforms basic commodities into food products and services; and is the source of nourishment for the American people. By any measure, the U.S. food system is a huge industry. The total food system accounts for about 18% of the gross national product (GNP) and about one of every five jobs in the U.S. (Browne, 1989, p. 9). The farm value of food products sold in 1987 was \$94 billion (Dunham, 1988, p. 33) and the final sales of the food marketing system to consumers reached \$600 billion.

This enormous industry is increasingly consumer, as opposed to producer driven. The emphasis is more and more shifting from production to marketing (Pierson and Allen, 1988). The basis of successful marketing is understanding the ultimate customer, in this case the American food consumer. In this environment, the consumer is setting the agenda for the food industry and the more successful firms have acquired a consumer-focused marketing orientation. Companies which succeed in the industry focus on satisfying the needs and wants of food consumers. They try to find out just what consumers want and then market products that will embody attributes which will meet those needs. The major attributes that consumers are looking for in food products are quality and taste, convenience, nutrition and wholesomeness, and value (Borra, 1988).

Poultry is an excellent example of an industry which has enjoyed great success, in part, by catering to consumers. U.S. poultry consumption rose to an estimated 77.8 pounds per person in 1987 on a retail weight basis, surpassing beef consumption for the first time

(Putnam, 1989, p. 22). Poultry consumption has risen 60% just since 1976 and increased over three fold since the late 1940s, when consumption averaged only 22.8 pounds per capita (USDA ERS, 1985, p. 15). Poultry has benefitted from a lower real price and from health related concerns relative to beef. In addition, though, the poultry industry, and particularly the large chicken processors, have provided scores of new brand-name, value-added products processed for the convenience of consumers.

A knowledge of major consumer trends and an understanding of their marketing implications has become crucial in the food industry. This article will outline major consumer trends and their implications for the U.S. food system.

#### Demographic Factors, Lifestyles, and Market Segmentation

The demographic characteristics of the U.S. population are undergoing tremendous change, and these changes have major implications for the food industry. Perhaps the basic factor with the most obvious significance for food demand is the declining rate of growth of the population. The Census Bureau is now projecting that, under the most likely scenario, the population of the U.S. will actually start to decline within the next 50 years (Wall Street Journal, Feb. 7, 1989).

In addition, the population is growing older, living longer, residing in smaller households, and moving regionally, plus the ethnic mix is changing. The median age of the population will increase from 31.8 in 1986 to 36 years by the year 2000 (Kiplinger Ag. Letter, Dec. 30, 1987 and U.S. Dept. of Commerce, 1988, p. 13). The baby boom generation, born between 1946 and 1964, is becoming middle-aged. The population between 30

and 50 years old will have expanded by 20 million between 1980 and 1990 (Mehegan, 1988). As just one example of the impact of these trends, we are seeing the fast food industry target more advertising toward adults and families, rather than teenagers who are a declining proportion of the population.

The number of people 65 years of age and older is projected to more than double in the next 50 years, going from 30 million now to 68 million in 2040 (Wall Street Journal, Feb. 7, 1989). Most, although certainly not all, of these seniors will be healthy, active and financially secure. An aging America will be more concerned about the nutrition and health implications of food and will want products that meet their special needs, such as low-sodium and low-fat items.

The average household was down to 2.66 members in 1987, from 3.33 in 1960 (U.S. Dept. of Commerce, 1988, p. 43). Singles living alone, composed primarily of two distinctly different groups, the young and the elderly, account for about a quarter of U.S. households (U.S. Dept. of Commerce, 1988, p. 43). Over half of all households are composed of only one or two persons. Not surprisingly, there is an increasing demand for food products in smaller packaging units. Singles and smaller size families also typically consume more of their food away from home.

Projections are that 6 out of 10 Americans will live in the Sunbelt by the turn of the century (Kiplinger Ag. Letter, Jan. 30, 1987). About 1/2 of the population growth between now and the year 2,000 will occur in just three states: California, Texas and Florida (Wall Street Journal, Nov. 17, 1988). Typically, when people move, they can be expected to shed some of their old food habits and acquire some of the tastes of the region

in which they now reside. The increased consumption of Mexican and Southern-style food may be partly explained by regional migration (Kiplinger Ag. Letter, Jan. 30, 1987).

Due to differential birth rates and immigration, the ethnic mix of the U.S. population is changing. The fastest growing ethnic groups are Hispanics and Asians. There are now 19 million Hispanics in the U.S., and the projection for the year 2000 is for 30 million (Corchado, 1988). The largest group, about 12 million, are of Mexican origin, which is obviously also a major factor in the increased demand for Mexican food products (Wall Street Journal, Nov. 2, 1988).

Increasingly, food companies should think of targeting products at particular market segments. Back in the 1950s, the great middle class defined the American mass market (Koten, 1987). Consumer products were marketed to the predominant, largely homogeneous middle-class (Steinburg, 1983). The stereotypical U.S. family consisted of a working father, a mother who was a full-time homemaker, and at least two children. Now that stereotypical family represents only 11% of all households (Otten, 1986). Consumers have become heterogeneous with distinctly different food consumption habits. The market is breaking up along regional and demographic lines.

Companies have to learn how to target consumers in ever smaller market niches. With access to computerized supermarket sales data companies are learning much more about the market for their products and how it varies geographically. In the future, more of the marketing budget will likely go to local promotions, including trade discounts and coupons, than national advertising (Business Week, Jan. 26, 1987).

Many food companies now categorize consumers into various lifestyle groups and market their products accordingly. Pillsbury has divided food consumers into five lifestyle categories: the Chase and Grabbits, 26% of consumers; the Functional Feeders, 18%; the Down Home Stokers, 21%; the Careful Cooks, 20%, and the Happy Cookers, 15% (Pillsbury, 1988). The Chase and Grabbits are yuppies, young urban singles and married couples without children. They are willing to try new and different foods, and they want convenience, but not necessarily convenience foods. They are a rapidly growing group. Functional Feeders are typically older and the husband works in a blue-collar, union job. They are interested in preparing traditional meals in more convenient ways.

Down Home Stokers eat traditional regional and ethnic foods. Their incomes are lower and when the wives work, it is from economic necessity. Careful Cooks are better educated, older, frequently retired, and have higher incomes. They try to eat a healthy, nutritious diet, but still want to enjoy their food. Happy Cookers are households that contain a wife or, in some cases, a husband who enjoys cooking and baking, such as homemade pies and cakes. They want to buy basic ingredients and nutritious products such as fresh fruits and vegetables. The Chase and Grabbits and Careful Cooks are growing market segments, whereas the other three are declining.

Numerous different lifestyle profiles have been developed by various food market researchers. Many overlap significantly in their categories, even though the specific titles differ. One developed by the Community Nutrition Institute, for example categorized consumers into Meat Eater, On the Go, In a Dither, Conscientious, and Healthy Eater households (Leonard,

1982). Almost all seem to have catchy names for their various categories. People in the food marketing business seem to make greater use of such lifestyle categories than they do of such economic concepts as price and income elasticities, as they think about targeting their products.

#### Working Women and Convenience

One of the major social and economic trends of the last quarter century has been the increased labor force participation of women. The labor force participation rate for women went from 34.8% in 1960 to 55.4% in 1987 (U.S. Dept. of Commerce, 1988, p. 373). For married women 35-44 years old, the rate went from 36.2% to 71.7%. Even for married women whose youngest child is less than six years old and with a husband present, the rate has reached 56.9% (U.S. Dept. of Commerce, 1988, p. 374).

Not surprisingly, convenience is now one of the most important attributes in food products. There is an increasing willingness to pay more to buy convenience and quality. People want to do less and less cooking. One survey found that half of all women do not like to cook every day, and three quarters of them want to get the cooking over as quickly as possible (Mpls. Star Tribune, Oct. 26, 1988). Women still do over 90% of the cooking in American families (Burros, Feb. 24, 1988).

The time crunch has spawned an enormous and growing convenience-oriented industry. These time-pressured consumers do not want to buy ingredients for preparing meals: they want to buy meals. Much of the time, they do not even want to take the time to eat in a sit-down restaurant. There is a growing demand for meals that go from the freezer



to the microwave to the table and into the trash in the same container, with virtually no cooking or clean-up (Kiplinger Ag. Letter, July 2, 1987). Some 75% of households in the U.S. now own a microwave oven (Kiplinger Ag. Letter, May 20, 1988). In addition, over 60% of those employed have access to a microwave at their place of work (Mpls. Star Tribune, May 5, 1987). Supermarkets are being flooded with products designed for the microwave.

There is an economic model which helps us more fully understand the implications of these trends. The model of the household and time allocation, first developed by Gary Becker (1965) of the University of Chicago, states that households face not only a budget constraint, but also a time constraint. In addition, work is viewed as occurring within the household, as well as in the labor force. As incomes rise and the pressure on the available time increases, many consumers feel increasingly dollar rich and time poor. The pace of life seems to keep speeding up. In fact, the median leisure time declined from 26.2 hours per week in 1973, to 19.2 hours in 1980, to 16.6 hours in 1987 (Hage, 1988).

The time pressures on women in the labor force are perhaps greatest because they not only are working outside the home, but continue to do most of the work within the home. In fact, women's leisure time has been decreasing while that of men has risen. Between 1980 and 1986, the average hours worked per week by women rose 7%, when paid work, housework, and child care are included (Otten, 1988b). The leisure time of men is rising, because they are retiring earlier. Labor force participation among men over age 55 fell from 89% in 1955 to 71% in 1987 (Otten, 1988a).

### Changing Eating Patterns

Our fundamental eating patterns are changing dramatically. For many Americans, a typical breakfast is a muffin and a glass of orange juice eaten hurrying through the kitchen in the morning. Lunch is a cheeseburger and fries picked up in the drive-through lane at the fast food outlet and eaten while driving. Dinner may be a home-delivered pizza or some things picked up at the deli counter in the supermarket on the way home from work. Then, as a reward for making it through a tough day, they have a big bowl of premium ice cream while watching television at night. This behavior reflects Pillsbury's Chase and Grabbit group, the most rapidly growing category.

Fewer and fewer consumers are actually sitting down and eating the traditional three square meals a day (Morris, 1988). In a nationwide survey, only 50% of the adults said they ate three regular meals a day (Wall Street Journal, July 28, 1988). The term "grazing" has been coined to describe the continuous snacking or frequent, light eating behavior of a growing portion of the population (Iggers, 1987). Fast food chains want their products to be finger foods that can be eaten with one hand on the steering wheel. Family sit-down meals are becoming the exception, not the rule, in many households under the pressure of busy schedules. Some 41% of the households surveyed in one study said family members usually do not eat dinner together, although that is the meal most likely to be eaten together (Ver Meulen et al., 1987, p. 12).

Increasingly, different members of the same family eat quite different things. In the past, one could think of a gatekeeper, the wife and mother, who made the crucial decisions about food and diet for the

entire family. More and more it is the individual who is the key decision maker and who determines their own diet, even in the case of children. More convenience foods are being designed with the individual eater in mind. The increased prevalence of single-serving size containers is a reflection not just of single-person households, but also of individual-oriented eating (Morris, 1988).

The microwave is not treated as Mom's appliance the way the range and conventional oven are (Glazer, 1988, p. 229). Typically, everybody in the family cooks in it and it is frequently used to prepare foods that will be eaten only by the individual. Even quite young children can use a microwave oven because there is not as great a concern about their being burned as with traditional cooking appliances.

Human behavior is frequently contradictory, and many individuals' eating patterns are no exception. Many consumers seem to have almost schizophrenic eating habits (Flanigan, 1988). They carefully monitor the calorie and fat content of their main dishes, eating salads and lean entrees, and then splurge with a super rich dessert. The sales of both "lite", low-calorie products and calorie rich, high fat desserts and snack products are doing very well (Kiplinger Ag. Letter, Sept. 9, 1988). The explanation for these patterns is provided by the fact that food is many things to humans beyond simply a nutritional necessity. Food can also be a pleasure, a cultural and social medium, a comfort, and a reward (Ver Meulen et al., 1987, p. 12).

#### Food Safety, Nutrition and Health

Food safety issues have become a major concern with consumers. In a survey conducted for the Food Marketing Institute (FMI), 76% rated

pesticide and herbicide residues as a serious health hazard. Sixty-one percent, when asked, said they felt antibiotics and hormones in poultry and livestock feed were a serious hazard. The percent rating irradiated food a serious hazard was 43%, nitrates in food 38%, additives and preservatives 36%, sugar in food 28%, and artificial coloring 24% (Bruhn, 1988, p. 10).

However, these concerns seem to be largely latent. They are revealed when consumers are specifically questioned about such possible hazards, but most consumers have not altered their food purchases as a result of these concerns. In a survey by a food produce trade group, only 18% of those consumers concerned about pesticide residues indicated that they had actually changed their food buying behavior (Bruhn, 1988, p. 10). In an annual FMI survey of supermarket shoppers, 93% agreed very much or somewhat that the food in grocery stores is wholesome and safe (Borra, 1988).

One of the most potentially worrisome food safety problems is tampering. Recently, when small traces of cyanide were found on red grapes imported from Chile, the U.S. Food and Drug Administration temporarily warned consumers not to eat fruit imported from that country (Minneapolis Star Tribune, March 14, 1989). Such incidences, if they were to increase in frequency, have the potential to seriously undermine the public's confidence in the basic safety of food products. In response to these concerns, many food products now are packaged in containers with tamper-resistant features, such as plastic strips around jar lids. Obviously, though, such an approach does not work for many products such as fresh produce.

Under the glare of intense media attention, specific consumer food safety concerns can erupt into widespread alarm. A recent example is the case of the chemical daminozide, which is sold under the brand-name Alar and is used on apples. Although there is no clear scientific consensus on the health risk posed by Alar, the public reacted strongly. The concern focused particularly on children who are heavy consumers of apple products. Some school systems stopped selling apples in their school cafeterias (Rosewicz, 1989). The federal government and the food industry both need to take food safety concerns seriously and play an active role to maintain consumer confidence in the food system.

The major nutritional concerns in the U.S. have largely shifted from a focus on diseases related to nutrient deficiencies to a focus on the linkage between diet and the major chronic diseases. Widespread nutritional problems today are related to over consumption, rather than to a shortage of certain nutrients. In general, the typical American's diet contains too much fat, particularly saturated fat, cholesterol, sodium, and in many cases, too many calories for the level of physical activity. The average diet contains too few fruits, vegetables and complex carbohydrates, as are found in whole grain products (Mpls. Star Tribune, March 2, 1989).

About two-thirds of the two million deaths in the U.S. each year are due to heart disease, cancer and stroke (Mpls. Star Tribune, Feb. 3, 1989). The medical evidence has become increasingly strong that these three major causes of death are affected by diet and other lifestyle factors. Initially, the public had reason to be somewhat confused because there was scientific disagreement over the exact link between diet and

these chronic diseases. However, the message to the public from scientific report after report has become increasingly clear and consistent.

The strongest message is that the typical U.S. diet contains too much fat, particularly saturated fat (Mpls. Star Tribune, July 28, 1988). The message seems to be getting through to more and more consumers. In a Food Marketing Institute survey, 93% of the respondents indicated they are very or somewhat concerned about the nutritional content of their food. The concern expressed over fat in food increased 17 percentage points and over cholesterol 11 points between 1983 and 1987 (Borra, 1988). In another survey, 75% of the respondents were aware of the link between diet and chronic diseases and the awareness for some diseases was as high as 90% (St. Paul Pioneer Press, Aug. 12, 1988).

The average American consumes 37% of his/her calories in the form of fat, which is down from 40% in 1977. The average per capita consumption of some products high in saturated fats, such as red meat, animal shortening, butter, whole milk, and eggs is down. However, we still have a long way to go to meet the dietary recommendation, which is to reduce the fat content to 30%, and an even lower fat diet would yield further health benefits (Mpls. Star Tribune, Sept. 7, 1987 and March 2, 1989). For many Americans, there is a dichotomy between their awareness of what constitutes a nutritious, healthy diet and what they actually eat.

This resistance to changing our unhealthy food habits suggests there is great market potential for food products which have altered nutritional characteristics, but sensory attributes, such as taste, similar to the traditional product. Many people would like to eat a healthier diet, but

without fundamentally changing their consumption pattern. For this reason, the consumer demand for animal product options, such as leaner beef, should be substantial (National Research Council, 1988). The great appeal of non-caloric sweeteners, such as Nutra-Sweet (aspartame) is that individuals can reduce their caloric intake without cutting back on their consumption of sweetened products, such as soft drinks.

### Food Retailing Changes

The food retailing industry has responded to these consumer trends by changing quite dramatically. There is a trend towards fewer and bigger supermarkets. With fewer, but larger supermarkets, the number of smaller convenience stores continues to increase. The conventional supermarket is being replaced by the warehouse store, the gourmet market, and even the hypermarket, which places a warehouse supermarket and general discount store under one roof (Heller, 1986). The two fastest growing market segments are at the upscale and discount ends of the grocery business (Guyon, 1983). Consumers either want to buy the best or want the best buy. Many times, the same families will shop at both types of stores, stopping for some items at the upscale supermarket and for others at the warehouse outlet.

Within the stores, supermarkets are generally stocking more convenience and take-out foods and are giving more space and attention to the fresh produce section. Many stores are moving towards one-stop shopping, with an in-store bakery, deli, florist, dry cleaner, and even a post office. Grocers are going after a larger share of the food service business. To an increasing extent, grocers are becoming meal retailers.

Deli and take-out food sections have been greatly expanded and are particularly attractive because of their higher profit margin. With the proliferation of new products, the competition for shelf space in supermarkets is becoming hotter. In addition, the computerized scanner technology is giving grocers a much better idea of product movement and the sales performance of specific items.

Americans spent \$205 billion at food service establishments in 1987 (USDA, ERS, 1988, p. 3). The most uniquely American part of that industry is fast food, for which consumers spent \$56 billion in 1987 (Deutsch, 1988). Some 130,000 fast food outlets dot the U.S. and they serve about one fifth of the American public on a typical day (Glazer, 1988, p. 220 and Deutsch, 1988). McDonald's alone has 10,000 outlets and serves 17 million people per day (Deutsch, 1988). The rate of sales growth for the fast food industry has fallen from the double-digit rate enjoyed previously, to around 8% per year more recently (Deutsch, 1988 and USDA, ERS, 1988, p. 66). As the market is becoming saturated, the level of competition is intensifying.

Perhaps the most dynamic area of food retailing is in take-out and meal delivery. This fast growing segment encompasses food purchased for off-site consumption, frequently at home, and includes super market deli-counter sales, pizza home delivery and take-out, fast food drive-through, and restaurant carry-out meals. By 1987, take-out and delivery sales were over \$60 billion and accounted for some 15% of the dollars spent on food (Borra, 1988). A Food Marketing Institute survey found that 81% of all households buy take-out food over a one month period (Borra, 1988). Some households, between take-out and dining out, are virtually giving up



cooking except for special occasions. Take-out or delivered food is especially appealing to a household in which the adults are all employed in the labor force, even though its price is 2 to 3 times that of comparable homemade dishes (Time, April 11, 1988). Such people are tired and hungry at the end of the day, and do not want to cook, but they want the comfort and ease of eating at home. The term cocooning has been coined to describe the movement of more activities back into the home (Iggers, 1987).

#### Attributes, Packaging, Advertising and Brands

In 1983, 4,540 new food products were introduced and this number reached 7,866 in 1986 (USDA, ERS, 1988, p. 107). Such run-away product proliferation means the competition for supermarket shelf space is intense and that only a small percentage of the new products introduced will succeed.

The economic model developed by Kevin Lancaster (1966) which suggests that consumers view products as bundles of attributes or characteristics, can provide important insights when applied to consumer food demand. The model says that what consumers want is products with a desired combination of attributes. The increasing importance of convenience as an attribute in many products has already been discussed. There are many examples of product line extensions in which the new products differ by only a few or even a single characteristic, such as low-sodium or low-calorie versions of a product. Food scientists are increasingly being asked to develop products with a certain combination of characteristics. The considerable power of food technology to create products is certainly evident in

something like surimi, in which inexpensive fish is transformed into high-value seafood facsimiles, such as crab legs and lobster tails.

Our concept of a food product should be expanded to include characteristics attributable to the product's packaging and advertising. Nearly ten cents of every dollar spent for food and beverages is for packaging. The food products purchased in 1986 contained \$28 billion worth of packaging (Mpls. Star Tribune, Nov. 16, 1987). The package's appearance may be as important as its content or its price in the consumer's decision. If shoppers do not find the package appealing, they may never buy the product.

Increasingly, packaging may affect product characteristics other than appearance. New packages for fresh produce with membranes custom designed to the respiration rate of each type of produce may yield fresher fruits and vegetables (Hays, 1988). Now with the microwave, the package is actually becoming a cooking utensil in many cases.

The downside of all this packaging for appearance, convenience and quality is that each American discards an average of 1,100 pounds of waste per year. About two-fifths of the waste is packaging, much of it from food products (Mpls. Star Tribune, Nov. 16, 1987). One third of the states will run out of the landfill capacity to dispose of this waste by 1990.

The expenditures on advertising and promotion by the food industry are enormous. Total food-related advertising reached \$10 billion in 1987 (USDA, ERS, 1988, p. iii). Through advertising, companies try to create a certain impression or perception of their product among consumers. More specifically, the goal is to differentiate their product from competing

ones. The basic idea is to convince the consumer that the attributes of a particular product are different from and better than those of competitors' products. The goal is to foster brand loyalty for a product. In some cases, successful advertising may create product differentiation when there are, in fact, no substantive differences in attributes between products.

The impact of advertising has strengthened the importance of brands in the food industry. Brand names may be intangible factors, but in many cases their value rivals, or may even outweigh, that of the physical product itself. The importance of a brand is the perception of product value and worth that is engendered in consumers (The Economist, Dec. 24, 1988, p. 95). Much of the take-over activity in the food industry in the last few years has been largely motivated by a desire to acquire market leading, brand names.

#### Implications for Agricultural Producers

Consumers are at one end of the food chain and farmers are at the other end. However, consumer-driven changes work their way through the food system from the retailer to the wholesaler to the food processor and back to the farmer. Agricultural producers need to help processors, distributors and retailers meet the demands of consumers for fresh, safe, nutritious, convenient and high-quality food products. Farmers and ranchers supply the raw materials to the food industry. Consumers are increasingly asking that the industry convert those commodities not just into food products, but actually into meals. Processors will increasingly want uniform materials for their production processes (Kiplinger Ag.

Letter, Dec. 2, 1988). To meet the needs of consumers, distributors and processors will do more specification buying with animals and products raised to certain standards. More production will also be done under contract (The Economist, March 4, 1989).

McDonald's is an example. They require that their lettuce suppliers harvest a week earlier than normal to prevent the core from becoming too crunchy. The potatoes need to meet strict size and moisture standards, or incentive payments are reduced (The Economist, March 4, 1989). Major poultry processors subcontract the rearing of their chickens with producers. They supply the chicks and feed, supervise the rearing, and the farmer receives something almost like a salary (The Economist, March 4, 1989). Farmers in the future will probably be giving up more of their independence in exchange for greater security. In particular, with such arrangements they will increasingly have more secure markets for their products.

Obviously, those who raise products which move directly to retail sale will profit from responding to consumer preference. However, even those engaged in the production of basic commodities, such as grain or beef, can not afford to ignore the market-driven requirements of agribusiness. Farmers need to shift from an approach of raising what grows best or is under a government program, to producing what sells best. The human consumption of products made with oats has been climbing, for example. Oat products, and particularly oat bran, are now riding the crest of a health food fad. However, the U.S. production of oats has languished and food manufacturers have had to turn to imports (Asinof, 1988).

If at least some consumers want organic products raised without pesticides or chemical fertilizers, and are willing to pay a premium for the product, this represents an opportunity for some farmers. Less than 1% of the produce in this country is currently raised organically. However, a Lou Harris poll conducted in fall 1988 found that 84% of consumers said they would buy organic products if available, and 49% would be willing to pay more for it (Nazaro, 1989).

If consumers want Alar-free apples even though the scientific evidence on demonozide's impact is open to various interpretations, then apple producers themselves would be well advised to call for an immediate ban on the chemical's use by the Environmental Protection Agency (EPA). This is particularly true if, as claimed, Alar is used on only 5% of the domestic apple crop, yet the sales of all apples and apple products are affected by consumer concerns (Begley and Hager, 1989, p. 20).

Furthermore, producers and the organizations which represent them are going to have to become accustomed to the desire for consumers and their organizations to have an increasing impact on food and agricultural policy. Consumers have a right to have a say in the determination of policies that influence the food which they eat. Producers and consumer groups need not be adversaries in influencing policy. Farmers and consumers should have a mutual interest in having a safe, nutritious, high quality food supply.

## REFERENCES

- Asinof, Lynn. "Eating Oats Grows Popular, But the Grain Is In Short Supply", Wall Street Journal, June 9, 1988, p. 1.
- Becker, Gary A. "A Theory of the Allocation of Time", Economic Journal, 75(1965), pp. 493-517.
- Begley, Sharon and Mary Hager. "A Guide to the Grocery", Newsweek, March 27, 1989, pp. 20-23.
- Borra, Susan 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.
- Browne, William P. "Agricultural Policy Can't Accommodate All Who Want It", Choices, First Quarter 1989, pp. 9-11.
- Bruhn, Christine, Sylvia Lane, and Laura Walton. "Perspectives of the Consumer" in Regulating Chemicals: A Public Policy Quandary, University of California Agricultural Issues Center, Davis, 1988.
- Burros, Marion. "Women: Out of the House But Not Out of the Kitchen", New York Times, February 24, 1988, p. A1.
- Business Week, "Marketing's New Look", January 26, 1987, pp. 64-69.
- Charlier, Marj. "The U.S. Beef Industry Just Can't Seem to Get the Hang of Marketing", Wall Street Journal, January 4, 1989, p. A1.
- Corchado, Alfredo. "Campbell Soup is Seeking to be Numero Uno where Goya Reigns", Wall Street Journal, March 28, 1988, p. 20.
- Deutsch, Claudia H. "There's No Quick Fix to Fast-Food Industry Woes", Minneapolis Star Tribune, March 13, 1988, p. 1D.
- Dunham, Denis. Food Cost Review, 1987, U.S. Department of Agriculture, Economic Research Service, Agricultural economic Report No. 596, Washington, D.C., September 1988.
- Flanigan, James. "Surgeon General's Report on Diet is a Sign of the Times", Minneapolis Star Tribune, August 5, 1988, p. 2D.
- Glazer, Sarah. "How America Eats", Congressional Quarterly's Editorial Research Reports, Vol. 1, No. 16, April 29, 1988.
- Guyon, Janet. "Supermarkets Change to Lure More Shoppers", Wall Street Journal, November 14, 1983, p. 27.

Hage, Dave. "Busier than Ever: Pace of Work is Changing the Way Americans Live", Minneapolis Star Tribune, September 5, 1988, p. 1A.

Hays, Laurie. "New Packages may Yield Fresher Produce", Wall Street Journal, October 18, 1988, p. B1.

Heller, Walter H. "A New Look at Store Formats", Progressive Grocer, December 1986, pp. 29-34.

Iggers, Jeremy. "Consumer Trends: Food Marketers are Told of Emerging Consumer Trends", Minneapolis Star Tribune, May 9, 1987, p. 1C.

Kiplinger Agricultural Letter, January 30, 1987.

Kiplinger Agricultural Letter, July 2, 1987.

Kiplinger Agriculture Letter, December 30, 1987.

Kiplinger Agriculture Letter, May 20, 1988.

Kiplinger Agricultural Letter, September 9, 1988.

Kiplinger Agricultural Letter, December 2, 1988.

Koten, John. "Upheaval in Middle-Class Market Forces Changes in Selling Strategies", Wall Street Journal, March 13, 1987, p. 21.

Leonard, Rodney E. "Nutrition Profiles: Diet for the '80s", The Community Nutritionist, September-October 1982, pp. 12-17.

Mehegan, David. "Baby Boom gives Retailers a Jolt", St. Paul Pioneer Press, September 24, 1988, p. 5B.

Minneapolis Star Tribune, May 5, 1987, p. 1T.

Minneapolis Star Tribune, July 28, 1988.

Minneapolis Star Tribune, "U.S. Diets are Slightly Better", September 7, 1987, p. 3C.

Minneapolis Star Tribune, "Experts say Trash Crisis will soon be Upon Us", November 16, 1987.

Minneapolis Star Tribune, October 26, 1988, p. 1T.

Minneapolis Star Tribune, February 3, 1989.

Minneapolis Star Tribune, "Council Calls for Broad Changes in Eating Habits", March 2, 1989, p. 3A.

Minneapolis Star Tribune, March 14, 1989.

- Morris, Betsy. "Are Square Meals Headed for Extinction?" Wall Street Journal, Vol. 1, No. 16, April 29, 1988.
- National Research Council, Committee on Technological Options to Improve the Nutritional Attributes of Animal Products. Designing Foods: Animal Product Options in the Marketplace, National Academy Press, Washington, D.C., 1988.
- Nazaro, Sonia. "Big Firms Get High on Organic Farming", Wall Street Journal, March 21, 1989, p. B1.
- Otten, Alan L. "Deceptive Picture: If you See Families Staging a Comeback, It's Probably a Mirage", Wall Street Journal, September 25, 1986, p. 1.
- Otten, Alan L. "People Patterns", Wall Street Journal, November 10, 1988, p. B1.
- Pierson, Thomas R. and John W. Allen. "Directions in Food Marketing: Responding to Consumers of Tomorrow", Annual Agricultural Outlook Conference, U.S. Dept. of Agriculture, Washington, D.C., November 29, 1988.
- Pillsbury Company, What's Cookin' and Trends in American Eating Behavior, 1988.
- Putnam, Judith J. Food Consumption, Prices and Expenditures, 1966-87, U.S. Dept. of Agriculture, Economic Research Service, Statistical Bulletin No. 773, January 1989.
- Rosewicz, Barbara. "Pesticide Risk from Apples: Who's Right?", The Wall Street Journal, March 10, 1989, p. B1.
- St. Paul Pioneer Press, August 12, 1988, p. 3A.
- Steinburg, Bruce. "The Mass Market is Splitting Apart", Fortune, November 28, 1983, pp. 76-82.
- The Economist, "The Year of the Brand", December 24, 1988, pp. 95-100.
- The Economist, March 4, 1989, p. 68.
- Time, "Taking Out, Eating In", April 11, 1988.
- U.S. Department of Agriculture, Economics Research Service, Food Consumption, Prices and Expenditures, 1964-84, Statistical Bulletin No. 736, December 1985.
- U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1988, Washington, D.C., 1988.



Ver Meulen, Michael, Michael Ryan, Mark Clements and Earl Ubell, "What America Eats", Parade, October 25, 1987, pp. 4-16.

Wall Street Journal, July 28, 1988, p. 25.

Wall Street Journal, "People Patterns", November 17, 1988 p. B1.

Wall Street Journal, "People Patterns" February 7, 1989, p. B1.