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## **FRESH FRUIT AND VEGETABLE PROCUREMENT DYNAMICS:**

### **The Role of the Supermarket Buyer**



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## Abstract

Over the past several decades, the fresh fruit and vegetable industry has been one of the most dynamic sectors in the U. S. food system. Consumer demand has soared to record levels and both suppliers and distributors have responded with impressive new programs, products and technologies. The objective of this report is to provide critical information on one of the most influential but least studied elements of the produce system: the supermarket produce buyer. This buyer represents the "gate-keeper" between the supply end of the distribution channel and the supermarket shelves. His standard operating practices (SOPs) and decisions have an enormous influence on industry performance. A "framework" for produce buying and selling SOPs is set forth in Section 2.

The methodology employed for this research relied on both secondary information and primary data collection (Section 3). The primary data were gathered from the produce director or buyer in one hundred supermarket chains who responded to an extensive mail survey. Together, these respondents represent approximately 75 percent of overall supermarket chain produce sales. Additionally, several groups of key industry leaders, suppliers and buyers, were interviewed to assist with interpretation of the survey data.

The empirical results and analyses of the study are contained in Section 4 and categorized into five principal themes:

- **Produce buying organization**
- **Produce buying process**
- **New product issues**
- **Produce department management: pricing and performance**
- **Produce department of the future: buyer projections**

Further, perspectives and strategic implications of these results, particularly from the view of the supplier, are elaborated in Section 4 and summarized in Section 5. Among the key findings: produce buyers are operating under increasing pressure as their stable to declining numbers are now responsible for three times as many items as they were 30 years ago; terminal markets continue to decline as important sources of produce, particularly for larger supermarket companies who currently procure only about 7 percent of their total needs at a terminal; "quality" and "consistency" were repeatedly reinforced as being more important than "price" alone in buyers' purchasing decisions; despite considerable industry urging, DPP has not been widely adopted as a produce department evaluation tool; and, despite POP material being the most frequently available type of promotional material from suppliers, produce buyers report that this is the "least influential" factor in their new product acceptance decisions.

These and other findings present numerous opportunities for positive responses from produce grower/shipper operations. This type of in-depth knowledge of customer behavior and decision-making criteria allows forward-thinking companies to develop successful sales and marketing strategies. This research suggests that closer supplier-buyer relationships and alliances are not simply needed to prosper, but are required to survive.

## **Acknowledgments**

Research of this type requires substantial industry participation. First, a large number of industry executives donated their time to help identify the critical set of issues to include in the mail questionnaire and, later, to assist in data interpretation. Many of these individuals shared confidential information, not generally available in the public domain, that has added substantially to the richness of this report. Importantly, to all those patient supermarket produce directors and buyers, from 100 different companies, each of whom on an individual basis gave freely of firm-level information as well as their own judgments, out of a genuine interest in improving the performance of their industry, we offer our heartfelt gratitude.

This project was supported in part by the Produce Marketing Association. We would like to thank the Association Board for endorsing the study and especially Mark Munger, Director, Retail Division, for his encouragement and insight throughout the study.

We appreciate the high level of confidence that these individuals and companies placed in us in the conduct of this research and hope that the resulting report makes a contribution to the produce industry worthy of their support.

Finally, we are grateful for the helpful comments of Professors Bruce Anderson, Gerry White, and Lois Willett, all of the Department of Agricultural, Resource and Managerial Economics at Cornell University.

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## Section I: INTRODUCTION

### A) Study Objectives and Rationale

Over the last several decades, the fresh fruit and vegetable industry has been one of the most dynamic sectors in the U.S. food system. Demand has soared and both suppliers and distributors have responded with impressive new programs, products and technologies. The result has been an unequivocal improvement in industry performance. The objective of this report is to keep abreast of these rapid changes by an intensive investigation of one of the most influential but least studied elements of the produce system: the supermarket buyer.

The supermarket buyer was selected as the focus of study for three reasons. First, marketing activities--including the functions of the supermarket buyer--comprise over 75 percent of the value of all consumer spending on fresh fruits and vegetables, while the farm value contributes only the remaining 25 percent (Table 1.1). Thus, one can reasonably argue that over three-quarters of the opportunity of improving produce system efficiency resides in the marketing portion of the industry. Second, over three-quarters of all fresh fruits and vegetables are sold through the supermarket distribution channel (Figure 1.1). Thus, it is by far the principal channel of produce distribution in the United States. Third, the headquarters produce buyer serves as the "gatekeeper" to the stores. Shoppers never get the opportunity to exercise their rights of "consumer sovereignty"--that is, to transmit their preferences to producers--unless a headquarters supermarket buyer first authorizes the product to be on the store shelves. Thus, it is imperative both for produce system efficiency and for supplier strategic decision-making to develop an improved understanding of the key behaviors and standard decision rules exercised by this powerful group of system players.

**TABLE 1.1**  
**Total Expenditures for Food, for United States Farm**  
**Foods, and for Fresh Fruits and Vegetables: United States 1989**

	<b>Total Expenditures</b>	<b>At Home Use</b>	<b>Away from Home Use</b>	<b>Marketing Bill</b>	<b>Farm Value</b>
		(billions of dollars) <sup>1</sup>			
All foods	507.2 (100.0)	284.3 (56.1)	222.9 (43.9)	NA --	NA --
U.S. farm foods	423.4 (100.0)	258.6 (61.1)	164.8 (38.9)	320.4 (75.7)	103.0 (24.3)
U.S. fruits & vegetables <sup>2</sup>	95.1 (100.0)	NA --	NA --	77.5 (81.5)	17.6 (18.5)
All fresh fruits & vegetables <sup>3</sup>	65.0 (100.0)	39.0 (60.0)	26.0 (40.0)	50.0 (76.9)	15.0 <sup>4</sup> (23.1) <sup>4</sup>

Source: (How 1993)

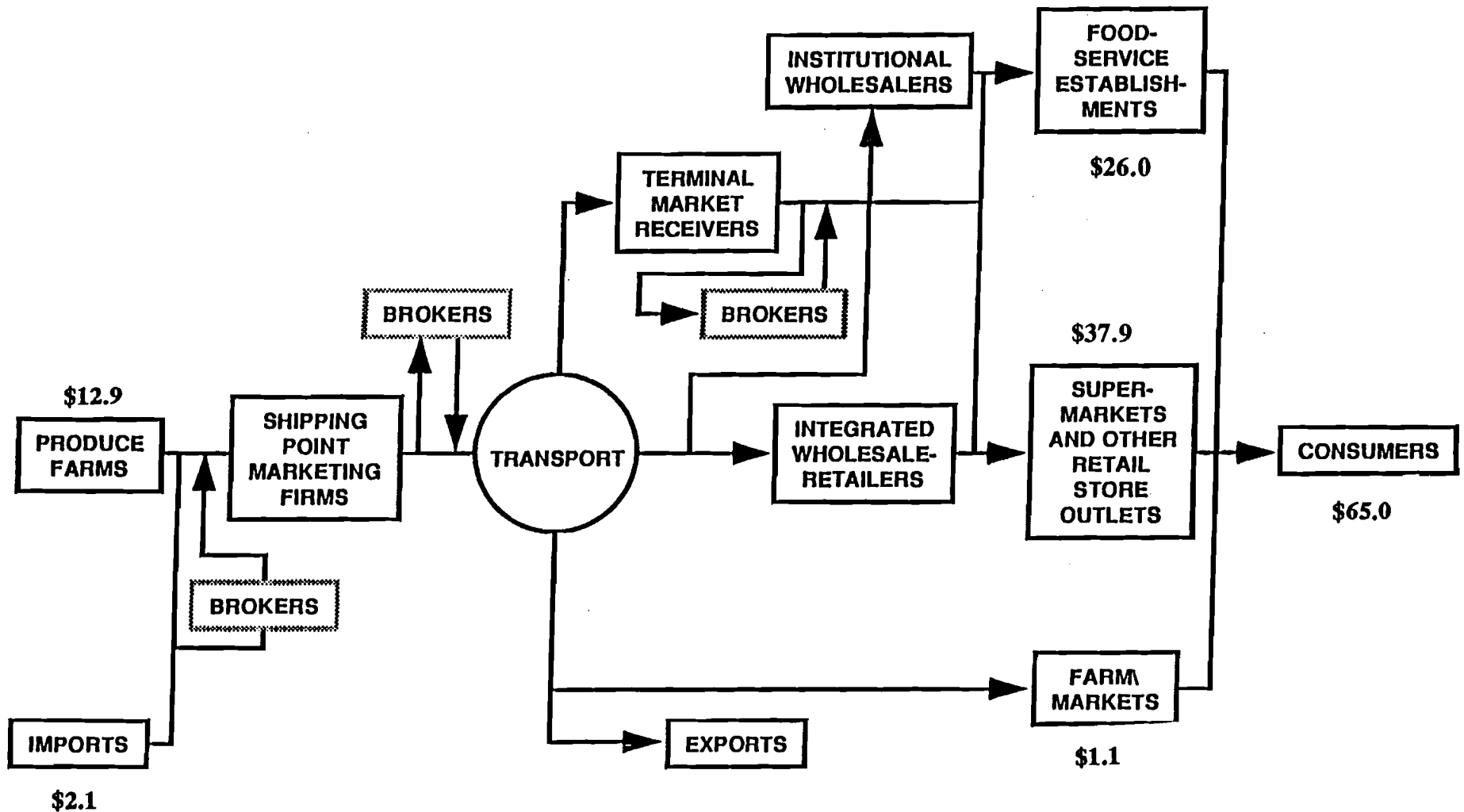
<sup>1</sup>Numbers in parentheses represent percentages of total. NA, not available.

<sup>2</sup>Fresh and processed. Also includes soup, baby foods, condiments, dressings, spreads, and relishes.

<sup>3</sup>Estimate assuming fresh sales constitute 60% of total fresh and processed; imports valued at \$8 billion.

<sup>4</sup>Estimate assuming U.S. farm value of \$12 billion plus imports valued at \$3 billion at point of entry.

**FIGURE 1.1**  
**U.S. FRESH FRUIT AND VEGETABLE MARKETING SYSTEM, Early 1990s**  
**(Billions of \$)**



### ***B) System wide Growth and Change: Consumer Demand***

Marketing starts with the consumer. It is all about identifying what it is that consumers want and trying to provide it. If this can be accomplished at a profit, a firm (and industry) is generally considered successful. This report examines the means and the extent to which fresh produce buyers contribute to the achievement of this performance standard.

Consumers have been unabashedly clear in putting forth their views on fresh fruits and vegetables over the last decade. Motivated by greater concern over health, nutrition and physical fitness, consumers have driven fruit and vegetable consumption to historic high levels. Between 1967 and the early 1990s, fresh fruit and vegetable consumption more than doubled: from 143 pounds per capita to 300 pounds (Table 1.2). This is a record of consumer endorsement unmatched by any other food group during the same period of time.

**TABLE 1.2**  
**Estimates of Fresh Fruit and Vegetable Sources and Use**  
**of Supply in the United States, Early 1990s**

<b>Produce</b>	<b>United States</b>			<b>Domestic Use</b>	
	<b>Production</b> (millions of pounds)	<b>Imports</b>	<b>Exports</b>	<b>Total</b> (pounds)	<b>Per Capita</b>
<b><i>Fresh Fruit</i></b>					
Citrus	8,400	200	2,200	6,400	25.6
Bananas	10	6,200	--	6,210	24.8
Apples	6,000	250	800	5,450	21.8
Other fruit	6,800	1,350	500	7,650	29.4
<b>TOTAL</b>	<b>21,210</b>	<b>8,000</b>	<b>3,500</b>	<b>25,710</b>	<b>101.6</b>
<b><i>Fresh Vegetables</i></b>					
Major vegetables	24,000	2,800	1,750	25,050	100.2
Other vegetables	5,000	500	250	5,250	21.0
Melons, all kinds	5,000	1,000	300	5,700	22.8
Fresh Potatoes					
Irish potatoes	12,300	600	400	12,500	50.0
Sweet potatoes	1,100	--	--	1,100	4.4
<b>TOTAL</b>	<b>68,610</b>	<b>12,900</b>	<b>6,200</b>	<b>75,310</b>	<b>300.0</b>

Source: (How 1993)

There are a number of explanations regarding the steep increase in consumption. Some produce industry observers believe these increases in fresh produce consumption have occurred as a result not only of greater knowledge of and concern for nutrition and health, but also of changes in lifestyle, tastes and preferences (How 1990). Several independent surveys support this view. The "1993 Fresh Trends Consumer Profile" (*The Packer* 1993) reports that 42 percent of consumers surveyed reported purchasing a particular produce item more often in the most recent year because of health or nutrition reasons. Further, the Food Marketing Institute's "Annual Consumer Trends Report" for 1993 shows that consumers have responded more to the call for a healthier diet by "eating more fruits/vegetables" than they have for any of the other criteria listed (Table 1.3). Other researchers, however, have pointed out that changes in consumption may have

resulted primarily from changes in prices, incomes and demographics, not preferences alone (Thompson, *et al.* 1990).

**TABLE 1.3**  
**Dietary Behavior: 1991-1993**

*Q: What, if anything, are you eating more or less of to ensure that your diet is healthy? (Verbatim responses coded to categories below; multiple responses accepted.)*

	Jan. 1991 Total	Jan. 1992 Total --%--	Jan. 1993 Total
<b>Base</b>	1,004	1,000	1,006
<i>Those Giving a Dietary Change</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
More fruits/vegetables	57	60	62
Less meat/red meat	34	31	30
Less fats/oils	25	28	26
Less sugar	19	12	15
Eating more chicken/turkey/white meat	16	14	14
Less snack foods	4	12	12
Eating more fish	14	10	10
More fiber	16	8	8
Less salt	10	8	8
Less cholesterol	12	8	6
Less fried foods	7	7	6

Source: FMI 1993

### ***C) System wide Growth and Change: Marketers Respond***

Naturally paralleling the increase in consumption figures have been the changes in several retail measures about the importance of produce. Three key retail performance indexes--household spending per week, total category spending and gross margin--have all increased substantially more for fresh produce since 1987 than for the supermarket as a whole (Table 1.4). Such stark differences in performance are "attention grabbers" for senior retail management and result in greater care being lavished on the produce department.

**TABLE 1.4**  
**Supermarket Produce Departments: Selected Statistics**

	1987	1992	CHANGE
<b>Produce</b> spending/week/household	\$4.45	\$5.89	+32%
<b>Produce</b> total retail spending	\$39.1B	\$55.6B	+42%
<b>Produce</b> gross margin	32.3%	39.1%	+21%
<b>Storewide</b> grocery spending/ week/household	\$46.08	\$56.75	+23%
<b>Storewide</b> grocery retail spending	\$267.6B	\$282.2B	+30%
<b>Storewide</b> gross margin	23.7%	28.3%	+19%

Source: *Supermarket Business*, September 1988, 1993.

Moreover, many retailers have experienced first-hand how critical produce can be to the whole organization. Again, FMI's "Consumer Trends" tells the story. In 1993, when deciding in which store to shop for food, the importance of "quality produce" was ranked higher than any other single store selection criterion by both male and female primary shoppers (Table 1.5). As a result, produce, in many cases, has been elevated to the status whereby senior executives now often attempt to position the image of the entire store based on the quality and freshness of the produce department.

**TABLE 1.5**  
**Importance of Supermarket Features by Gender**

*Q: In the next series of questions, I'm going to read a list of factors that may or may not be important when a person decides where to shop for food. For each factor, please tell me if it is very important, somewhat important, not too important, or not at all important to you when you select a primary food store.*

	Jan 1993 Total	Women			
		Men	Total	Working	Nonworking
<b>Base</b>	<b>1,000</b>	<b>259</b>	<b>741</b>	<b>401</b>	<b>336</b>
<i><b>Very or Somewhat Important</b></i>			<i>--%--</i>		
Quality produce (fruits & veg.)	99	99	100	100	99
Clean, neat store	99	96	100	100	100
Good variety or wide selection	97	96	98	98	98
Good, low prices	96	95	97	97	97
Good quality meat	96	93	97	97	96
Courteous, friendly employees	95	93	96	96	97
Use-by/best-if-used-by date marked on products	95	93	96	96	96
Readable and accurate shelf tags	94	91	95	94	96
Convenient location	93	92	94	95	93
Fast checkout	92	90	92	93	91
Items on sale/\$-saving specials	91	84	93	93	93
Nutrition/health info. available	85	77	88	87	88
Attention to special requests/needs	84	76	87	85	88
Convenient store layout	81	74	84	83	84
Fresh food sections (deli/bakery)	76	71	78	80	76
Good selection nonfood products	72	66	74	74	74
Environmental programs	72	64	74	76	73
Private label or store brands	65	59	67	66	67
Fresh seafood section	64	62	64	62	68
24-hour operation	50	50	50	54	45
Pharmacy in store	42	39	44	42	46

Source: FMI 1993.

Such dramatic growth and performance improvement have caused retailers to be optimistic regarding not just the current situation for fresh produce but likely future directions. Table 1.6 shows the results of a Delphi Research Study conducted in 1990 with a national sample of retail executives at the Cornell University Food Executive Program. It displays the percentages of total supermarket sales accounted for by the various major departments in actual terms for the two early periods 1967 and 1989, and

forecasted for the year 2000. Note that the store share held by produce grew from 7.6 percent in 1967 to 9.2 percent by 1989. At that point, in 1990, the food executives at Cornell were asked to forecast what these same percentages would be like in the year 2000. While this group of executives was quite negative regarding the future of meat, dairy and dry grocery sales, produce received the opposite projection. It was the only major department predicted to experience growth, in fact, to nearly 12 percent of store sales by the end of the century. Indeed, it appears that in 1993, two years later, the executive forecast is on track. According to the most recent figures available from Supermarket Business, produce distribution had already climbed to 10.2 percent of storewide sales by 1992 (Table 1.7).

**TABLE 1.6**  
**Supermarket Sales Distribution:**  
**Past, Present and Future**

	1967 <sup>1</sup>	1989 <sup>2</sup>	2000 <sup>3</sup>
Meat	24.1%	16.9%	13.2%
Dairy	11.1	8.2	7.5
Produce	7.6	9.2	11.9
Deli	--	3.8	5.6
Bakery	--	2.0	2.7
Seafood	--	1.0	2.4
Frozen	4.3	6.2	7.3
Dry grocery	34.5	28.5	23.9
GM/HBC/other	18.9	24.2	25.5
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

<sup>1</sup>Chain Store Age 1968

<sup>2</sup>Progressive Grocer 1990

<sup>3</sup>Cornell Food Executive Program projections (Russo and McLaughlin 1991)

**TABLE 1.7**  
**Food Store Sales Distribution by Major Department: 1992**

Major Department	Percent of Total Food Store Sales
<i>Grocery</i>	--%--
Dry grocery (food)	27.3
Dry grocery (non-food)	12.8
Health and beauty care	6.0
General merchandise	4.7
<b>SUBTOTAL</b>	<b>50.8</b>
<i>Perishables</i>	
Meat/fish	16.2
<b>Produce</b>	<b>10.2</b>
Bakery	6.5
Dairy	6.2
Frozen	4.7
Deli	5.4
<b>SUBTOTAL</b>	<b>49.2</b>
<b>TOTAL</b>	<b>100.0%</b>

Source: Supermarket Business, September 1992

The growth of the produce department in retail stores has paralleled the rapid evolution of the entire food industry resulting in dramatic changes in the role and responsibilities of the supermarket produce buyer. The strategic setting at supermarket headquarters that shapes so much of buyers' standard operating procedures has changed for a variety of reasons. First, gradually increasing consolidation in the food system has contributed to more intense rivalries in recent years. Net after-tax profits in food retailing have been flat for nearly a decade and financial failures have escalated. For example, industry wide profits as measured by net earnings after taxes for food chains varied only between .86 percent and 1.2 percent for the entire decade of the 1980s, except for 1986 when after tax profit was 1.45 percent (Cornell University and FMI). Further, increased mergers and acquisitions have had a structural impact on the retailing industry and are greatly influencing marketing relationships with suppliers. Supplier-distributor strategic alliances are now commonplace in every major industry. These changes influence the responsibilities of produce buyers and the standard practices designed to facilitate those responsibilities.

Most importantly, produce buying and merchandising decisions are becoming increasingly centralized at headquarters and many firms are permitting fewer decisions to be made at the store-level. "Category management" is beginning to influence produce departments in much the same way it already has in the grocery categories. Many produce executives observe that, given an accurate store-level inventory (now feasible with electronic inventory controls at retail) headquarters can usually arrive at store-specific orders with greater precision than the individual stores themselves.

Throughout the decade of the 1980s, the produce department, along with many other "perimeter" departments including deli, dairy, bakery, fresh meats, and fish, began receiving greater attention in many retail companies, often at the expense of grocery departments. An important part of the management, direction and merchandising activities of grocery departments, historically the mainstay of the conventional supermarket, had been determined by national brand manufacturers. Manufacturers ensured product quality and it was their well-known, highly advertised brands that attracted shoppers to stores. In produce (and other perimeter departments), however, the retailer is in control. Few brands exist. This distinction is fundamental in today's competitive environment as retailers aggressively attempt to differentiate themselves from competitors, and ally themselves with consumers. Simultaneously, retailers are seeking and gaining greater power in distribution channels. In trade jargon, the "power pendulum" is said to be swinging to retailers.

Finally, in most instances the higher gross margins of perimeter product lines relative to dry grocery margins also provide a major incentive for increased retailer attention, although the net profit of many of these items is not precisely known by most operators.

The combination of forces above have elevated the produce buyer to a more prominent place in most wholesale-retail organizations. Yet, as a result, today produce buyers have less time to devote to traditional activities and are under greater pressure to control produce procurement and merchandising functions in order to meet broader company and store-wide expectations. The remainder of this report elaborates on the new functions, expectations and levels of responsibilities of the contemporary produce buyer.

## **Section II: A FRAMEWORK FOR PRODUCE BUYING AND SELLING: STANDARD OPERATING PRACTICES <sup>1</sup>**

Before developing a profile of the standard operating behavior of the contemporary produce buyer, it is important to understand the overall buying and selling system in which he/she must operate. As a consequence of the often rapidly changing supply conditions and the high degree of perishability of fresh fruits and vegetables, sales and procurement procedures in fresh produce are considerably more dynamic than even most other commodity-based industries. Of course, economic theory provides a starting point for decision-making, but is hardly an adequate guide for the many rapid-fire decisions expected of produce buyers and sellers. Instead, buyers and sellers have evolved certain "heuristics" or rules of thumb that allow them to digest enormous amounts of information over long distances, and sometimes prosper in the process. All of this in the face of volatile and sometimes difficult industry conditions. We call these heuristics "standard operating practices" for the produce buying and selling system. Taken together, they provide us with an appropriate framework in which to understand the empirical evidence to follow.

Forces of supply and demand, working through incentives of profit and loss, are assumed in economic theory to result in the most efficient production and allocation of goods desired by consumers. However, because the real world does not always conform to neoclassical assumptions, this result does not always follow. Prices negotiated by produce buyers and sellers, as a set of signals for coordinating resource allocation at different stages of the produce system, do not always clearly communicate the desired specifications. Growers and shippers, for example, must make sizable long-run investment decisions, especially in perennial crop industries such as tree fruits, in the face of substantial uncertainty regarding future conditions. Because future conditions are difficult to predict with accuracy, growers and the shippers who may assist in financing them, are forced to base investment decisions primarily on prices and returns from previous years. The hit-or-miss result of such long-run supply adjustments may not closely correspond to long-term demand trends.

If prices cannot convey all the information necessary for decision-making, by what means do produce buyers and sellers coordinate the transfer of their products and the organization of their resources? This section elaborates on how produce buyers and sellers cope with imperfect information and rapidly changing supply conditions by using standard operating practices that circumvent sole dependence on prices. The dynamic standard operating practices (SOP's) are classified below into five major areas: 1) the role of marketing information; 2) the market pricing process; 3) terms of trade; 4) inventory allocation techniques and 5) transportation requisites.

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<sup>1</sup>Kathryn Buckley, former analyst with the Economic Research Service, USDA, is gratefully acknowledged for her editorial contribution to a preliminary version of this section.

### ***A) The Role of Market Information***

Information flows to produce buyers and sellers from many and varied sources and is disseminated in numerous ways. Figure 1.1 (Section I) provides a simplified schema of the principal participants in the produce information network. Several specific information agencies and networks which are of particular importance to the produce system are highlighted below.

First, the USDA provides a number of services such as the Federal State Market News reports of shipping point prices paid and volumes shipped; the market "unloads" reports which detail the shipments distributed in major U.S. cities; Outlook and Situation estimates of crop size, quantities in storage, fresh produce import and export figures, and per-capital consumption; as well as various broader industry wide studies. Universities and some consulting firms also provide the industry with research reports that are likely to be more useful in a longer-run orientation. Almost all produce practitioners make use of USDA data at least some of the time. Questions regarding the reliability of the information are often raised, and its lack of timeliness is a frequent trade criticism, but it serves nonetheless as a valuable benchmark for many shorter-run industry studies and also provides a foundation for many long-run decisions.

A second commonly used information source is the industry trade press. A variety of weekly and monthly publications regularly apprise the industry of market changes, new technologies, and trends in related industries as well as reporting on significant developments in specific produce companies. The trade press is closely followed by most operators in the produce industry, and the information provided has an important influence on trade perceptions and consequently on decisions.

With varying degrees of structure, several of the produce state and/or federal commodity boards/commissions engage in information collection and/or dissemination. The information provided may range from the highly informal, such as exchanges of planting intentions by grower-shippers at local trade meetings, to the highly formal, such as regular weekly publication of current market news reports, redistribution of federally collected historical price levels, and other general information of interest to association members and their customers. This information is especially valuable to shippers setting up harvesting and packing schedules, allocating supplies among different markets, and in developing both short- and long-term marketing plans. Trade groups also frequently sponsor certain production and marketing research projects, the results of which are made available to the trade and provide up-to-date information concerning legislative lobbying efforts. This latter type of information is more likely to have an impact on longer-run industry decisions.

These written reports, although invaluable, play a comparatively minor role as information needed for day-to-day buying and selling decisions. For day-to-day decision-making, the produce industry depends largely on the facsimile machine and telephone or, more accurately, the contacts made through them. Most buyers and sellers report that the majority of their market information and nearly all of their most critical information (e.g. turning points in the market or a supply source in a short situation) comes from their daily fax and telephone contacts. Produce buyers, for example, reported that on busy days, one-half to two-thirds of their day may be spent on the phone (see Section IV).

Contacts typically include buyers, brokers, and shippers of various types. Shippers may exchange information on planting activities, weather forecasts, or supply

conditions. Conversely, many produce marketers observe that the first signal of an impending change in market conditions is when a call from an unfamiliar contact requests certain product or sales information. Techniques designed to maximize information flows while permitting quick and efficient product exchanges have historically been learned in telephone sales seminars conducted by various companies (e.g. American Telephone and Telegraph) and trade associations (e.g. United Fresh Fruit and Vegetable Association). The latter association discontinued offering these seminars in 1992.

In addition to monitoring market situations with respect to their shipping competitors, shippers must also look up and down the vertical distribution channels in search of information. The first essential is knowledge of "upstream" conditions at the growing and packing levels. In recent years, computer technology has provided the means for electronic transmission of supply information and improved access for smaller, geographically dispersed firms. Several proprietary firms now provide electronically transmitted fruit and vegetable supply information and also provide a buying and selling outlet for subscribers. For integrated grower-packer-shippers, this knowledge is generally gained through an internal firm communication system. Initiation of such a system may pose difficulties for larger geographically diversified firms. These firms must constantly stay abreast of harvesting and packing progress in diverse areas, and must closely match inventory levels (sometimes in other states or even foreign countries) with daily sales commitments.

The distance between a sales agent or broker and his/her product in geographically diverse firms may be overcome through the use of daily reports transmitted electronically from one packing house to its central sales headquarters. The information provided may include harvest plans, current packing house inventory by cartons packed, and a detailed quality control assessment. Not only does the daily report bridge the information gap between the field and sales clerk, the changing composition of recent sales staffs is also highlighted.

Attempting to gather supply-side information presents a challenge to produce shippers, but the uncertainties faced on the demand-side are probably far greater. This results from shippers' greater proximity to, and familiarity with, production areas and their distance from, and general lack of familiarity with, buyers' operations and far-away consuming markets. Shippers react to these uncertainties in very different ways. Many less well-managed, or smaller companies, often accept these demand uncertainties passively. This may represent more than 75 percent of all produce shippers. In such companies, little systematic demand-side information collection is attempted and long-range planning is rare. A primary operative in these firms is to sell the product to whomever will buy it, at the best price the market will bear.

These practices contrast sharply with those of leading, more intensively-managed shipping firms which represent perhaps fewer than 25 percent of all shipping firms. Many firms of the latter type take significantly greater initiatives in attempting to collect information, understand, and even influence market demand. In fact, some of the lack of demand information collection efforts in smaller shipping firms can probably be attributed to the far greater activity level among the leading shipper groups. For the most part, it is these leading firms that tend individually to set their own prices for shipping point marketing functions such as packing, interpret supply and demand conditions, and translate them into initial market prices.

Collection of demand data by larger firms relies heavily on information gleaned from telephone contacts and, often, marketing trips to consult with buyers, industry training workshops where buyers are often in attendance, and annual trade association

meetings where private meetings are often pre-scheduled between an individual supplier and an individual buyers. Equipped with information as to buyers' needs, their company's' procurement and merchandising philosophies' and personal purchasing predilections, computerized records are maintained over time for the formulation of comprehensive marketing plans which are often tailored to meet the needs and desires of individual buyers.

Furthermore, a few of the largest shippers employ their own field marketing representatives. The responsibility of these representatives is to further facilitate the constant flow of information between buyer and seller, and in particular, to increase their shipper-employer's understanding of wholesale-retail markets. It is intended that this understanding will increase shippers' marketing awareness and knowledge of specific marketing and firm conditions thus strengthening the shipper's bargaining position vis-a-vis the wholesale-retail buyer.

Supply information may be transmitted to buyers through the use of shipper newsletters which describe the current and expected supply situation at the shipping firm. These newsletters are more than a collection of statistics describing supply conditions. They are subtle forms of advertising which might be classified more as informational than persuasive. Such vehicles enable suppliers to provide substantial amounts of information to their buying parties. In effect, these shippers are seizing the opportunity to improve their own positions by selectively altering the buyers' stock of information in an effort to influence buyer purchasing decisions.

Not all firms are equally able or equipped to collect and disseminate supply and demand information. Firm size appears to be the largest determining factor in ability to develop and distribute this type of information. Multicommodity shippers (firms selling more than three commodities) have several advantages in this regard over smaller, more specialized handlers (firms selling three or fewer commodities). The latter have primarily their own experience to draw upon in one production region. The geographic diversity of the former group, however, facilitates the quick transmittal of information regarding changing quality and yield variables. Moreover, the large inventories held by multicommodity shippers place them in a better position to estimate the overall industry supply situation.

### **Brokers as Information Resources**

Although brokerage companies earn commissions from arranging sales exchanges, many earn their reputations from the market information they are often in a position to provide. Brokers are frequently able to reduce search and transaction costs of both buyers and sellers through the provision of market information. Thus, most buyers and sellers (even those who profess not to use brokers for produce transactions) will sometimes engage the services of a broker for product procurement or sales solely to avail themselves of the broker's "fount" of information. Paying an occasional brokerage, rather than exclusively dealing direct, is regarded by some buyers and sellers as an inexpensive way to keep broker communication channels continuously open. This may also be a means of assisting certain brokers to stay in business, so that in the future, these brokers might be relied upon to supply buyers in need of specific products. Broker use greatly varies from firm-to-firm depending on firm strategy and area of the country. While larger organizations tend to use brokers infrequently, the majority of produce marketers employ broker services for some, if not all, of their procurement and sales transactions.

Brokers are often employed for the information services that many provide. Some brokers prepare a weekly report, tailored to individual retailers, suggesting items to

advertise for upcoming weeks based upon the brokers' current assessment of national supply conditions. Brokers may also provide comprehensive comparisons and fruit and vegetable descriptions between stores. Such comparative information is highly valuable for wholesale-retail buyers in selecting their own ad programs, in adjusting their product mixes, and in evaluating their pricing and merchandising strategies. Much of this information would also be useful to shippers for many of the same reasons. Despite their historical value, however, reports from this study suggest that many larger organizations are attempting to gradually eliminate the use of brokers, reasoning that their own staffs can perform the same service at less cost while retaining greater control.

### **Buyers' Information Sources and Handling Techniques**

Produce buyers seek information not only horizontally from their competitors, (i.e. in comparative price surveys and weekly advertising monitoring), but upstream and downstream in the vertical marketing channels. Information regarding the downstream demand curve they face typically comes through their own corporate merchandisers and telephone sales people, both of whom communicate regularly (often daily) with store level produce managers, as well as from the selected broker services discussed above. Merchandisers perform critical vertical coordination functions by transmitting information between corporate procurement headquarters and retail stores. Wholesale-retail telephone sales staff are typically responsible for receiving daily store produce orders and transmitting critical quality conditions and unanticipated inventory positions to produce managers.

As buyers look upstream in the distribution system, however, they rely on four fundamental sources for their information requirements. First, many fulfill much of their information needs via dealing directly with their suppliers over the telephone and/or reviewing shipper newsletters. Second, brokers, especially at shipping points, keep many buyers abreast of changing conditions by the means examined above. Third, virtually all wholesale-retail organizations use a local terminal market for at least a small portion of their fresh produce needs. Although declining in importance for today's supermarket buyer (see Section IV), these terminal market operators are frequently able to furnish information valuable to buyers, often with regard to quality comparisons between certain commodities arriving at the terminal from two or three different production regions. Fourth, and a most important source to the several large wholesalers and supermarket companies who employ them, is the information obtained from their field buying staff. The field buying staff is the nucleus for initial information collection and dissemination. Field buyers may supply their companies with specific advertising suggestions and approximate price, quality, and quantity forecasts giving companies more lead time to plan and coordinate impending promotions and permitting a more effective daily purchasing routine. Moreover, the proximity of field buyers to shippers often allows them to learn of "special deals" first, and their understanding of shippers' needs and operating philosophies often gives shippers more confidence that field buyers will handle transactions effectively and discretely.

Field buying offices are examples of wholesale-retail quasi-vertical integration into shipping point markets. By using field buyers, some wholesale-retail companies feel that they extract the majority of benefits associated with vertical integration, such as near-assured supplies and constant up-to-date information regarding supply conditions, without the added costs and considerable risk associated with shipping-point firm ownership or control. This form of quasi-vertical integration does not stop with the field buyers, however. Since many field buyers cannot physically cover the vast production areas for which they are often given responsibility, they often make use of local field inspectors, called "bird dogs" by the trade.

Bird-dogs may be employed by the original wholesale-retail company as essentially "assistant field buyers," but more commonly they are self-employed, often working for 10 to 15 buyers, some of whom may be brokers. Bird-dogs typically visit key fields and packing sheds in an area and report their findings to the field buying office. It seems likely that these field inspectors introduce some stability to shipping point market fluctuations by supplying perhaps 15 different buying organizations with identical supply information.

### ***B) The Market Pricing Process***

With few exceptions, virtually all produce commodities are sold the same way. Prices may be higher or lower, and package sizes and weights may differ, but the sales and procurement SOP's are highly similar whether the transaction involves apples or zucchini. Therefore, the pricing practices described here, and in general, all the SOP's reported in this report, have a wide relevance that generally apply to the entire fresh produce industry.

A variety of pricing strategies are observed in fresh produce procurement. Sometimes sellers contact buyers first, and sometimes the reverse is true. Crop availability strongly influences the balance of bargaining power that prevails in each transaction. These conditions often determine, for example, buyer response to a shipper's opening quoted price. Approximately 75 percent of the time, a supermarket buyer does not argue with a shipper's quote; the buyer may accept it or reject it, but he generally will not bargain. (This characteristic of supermarket buyers is apparently shared to a far lesser degree by terminal market buyers). This may be because the buyer perceives quality to be more important than price; because the buyer believes that he will be charged the market price at the end of the shipping day equal to that price charged his competitors (explained further below); or because the buyer is short on product and needs the product even at what he perceives to be a "higher-than-market" price.

The other 25 percent of the time, the buyer will counter with an alternative, generally including a lower price. However, in the ensuing bargaining process, certain factors are virtually fixed. For example, shippers, overtime, have successfully separated the cost of many of auxiliary services from the pricing of the product. This practice originated with several large shippers but quickly gained the support of many trade associations and subsequently all shippers. Such auxiliary services or "up-charges" include charges for palletization, pre-cooling, non-standard packaging or handling, special protective sprays, and certain brokerage commissions. Even though up-charges remain disliked and controversial among buyers, they today represent a strong SOP among sellers whose general practice is not to deviate from the tradition. Thus, commodity price is subject to change, but up-charges are not usually subject to bargaining. Since up-charges can sometimes approach 40-50 percent of product value, this SOP has the result of substantially reducing variability of the supply function. Subsequently, total price variability at the shipping point is reduced and shippers are assured of covering the full costs of at least a portion of their total production inputs before any trading begins. Since shippers' costs are partially covered, a large portion of the burden of f.o.b. price variability appears to be borne by growers.

The fixed nature of the up-charges rule is not immutable, however. Some buyers will constantly attempt to reduce an up-charge as a way of lowering total product cost; weak sellers sometimes succumb to this pressure. Moreover, buyers will listen carefully for the shipper to stipulate that the quoted product price does not include certain

additional services. If the shipper neglected to be explicit, some buyers simply cross out the up-charges on the invoice in retaliation and their remittance will be for product cost alone. Shippers have no legal recourse against this action.

Fruit and vegetable prices can change several times daily. Certain especially volatile commodities, lettuce and berries for example, may undergo more frequent price changes during what is known in the industry as a "hot market." Most buyers perceive that the price they pay is the lowest quote of the day; that shippers systematically review daily sales and adjust earlier quotes downward should the market price drop below the price quoted at the time the order was placed. However, this is not always the case. In fact, the rule of thumb employed by most shippers appears to be: whether the price moves up or down later in the day, the buyer generally is billed at the price he was initially quoted when the sale was consummated. These inaccuracies in buyer perceptions appear to persist since buyers are almost too busy with the next day's business to go back to check on yesterday's price levels.

There are several exceptions to this pricing rule. The occasional buyer who does call a shipper back attempting to negotiate a lower price because the market has dropped will often succeed. This does not help improve his relationship with shippers, however. Furthermore, shippers who owe buyers "favors" will often repay them by changing an earlier agreed-upon price to the lower end-of-the-day market settling price. Finally, a few shippers have agreements with some of their better customers that guarantee any future downward price changes will be retroactive. Shippers generally limit these guarantees to a period of one or two days.

### **Field Buyers and Pricing**

Field buyers play a key coordination role in the produce system. Not only are field buyers an important source of market information (see above), they also play an active role in pricing. The economies of scale in procurement appear to be such that only the largest companies employ field buyers; the amount of produce purchased by this method varies according to firm. In the early 1990s, fewer than a dozen wholesale and retail organizations made use of field buying staffs. The largest chains typically buy 85 to 90 percent of their total produce needs from their own field buyers. Perhaps as much as 25 percent of all U.S. fresh produce is procured in this manner.

The benefits of field buying are much debated. Firms that have field staffs defend their use explaining that it is necessary to have a presence in the fields and packing houses because of high produce price volatility. Those companies that do not, or cannot employ field buyers often contend that field buyers are physically unable to provide the field and packing house coverage necessary to effectively monitor quality and price. Shippers differ widely in their receptivity to field buyers. Some object to their proximity; they contend that it interferes with operations and gives buyers an unfair advantage in knowing precise supply conditions which the shippers do not possess on the demand side. Others welcome field buying activities, believing that these local buyers are more familiar and sympathetic to shippers' problems and are thus easier to do business with.

Irrespective of their views toward field buying, most produce marketing participants agree that the practice influences the price making process. Since field buyers are in constant communication with shippers, often in one location, they are more apt to be aware of sudden movements in a local market than a headquarters buyer located further away. Most importantly, as a result of his/her knowledge of local conditions and his/her understanding of grower-shipper problems, the field buyer may receive special deals from shippers. Although statistical corroboration is lacking, it is probable that such

practices result over time in slightly lower overall price to organizations with field buyers.

### *C) Terms Of Trade*

Terms of purchase define the responsibilities of buyer and seller for payment of product, transport, and related services as well as loss of quality and price decline in transit.

#### **Purchase Terms at the Shipping Point**

Most purchases by wholesale-retail organizations can be classified as one of two general types: the f.o.b. (free-on-board) sale, or the delivered sale. The most common form of these sale terms is the f.o.b. type, where the legal responsibility of the shipper ends upon placing the product in the truck or rail car in suitable shipping condition. The buyer then becomes responsible for all subsequent marketing changes. The f.o.b. produce sale is a quasi-incomplete exchange arrangement where risks and obligations are only partially exchanged through the use of conditional sales terms granting the buyer inspection and rejection rights. By contrast, most food and grocery products are sold on complete sales arrangements; that is, the exchange involves a total transfer of risks, rights, and obligations between buyer and seller with the physical loading of the product.

The delivered sales is generally more prevalent among shippers in the upper midwest than in other areas of the country. This type of agreement normally involves extending the shipper's responsibility for both merchandise and transportation charges to the wholesale-retail delivery dock. Shippers are often more likely to take the risks of delivered or even consignment sales during long-supply situations when it may be necessary to deviate from normal f.o.b. sale practices in order to move a product. This type of sale is also an incomplete agreement in the sense that it is still subject to ultimate buyer acceptance. The threat of buyer rejection is always present, and although it only appears to be exercised less than five percent of the time (Section IV), it is a buyer advantage of which shippers are ever-mindful.

A third type of shipping-point billing, also an incomplete exchange, is called open-billing. Essentially, open-billing refers to deferring actual price establishment until after the negotiation of sale at the wholesale level. The most important variant of this sale type is the consignment sale. Here, the merchant wholesaler agrees to receive a load from a shipper, sell it for the best prices he can obtain, deduct his selling charges, and remit the remainder, if any, to the shipper. The shipper assumes all marketing risks and transport cost. Although the wholesaler typically retains an average of 10 to 15 percent of the sale price as his commission, plus, in some cases, a handling charge, wholesalers frequently exercise considerable leeway in the actual percentage of the products' receipts that are returned to the shipper. Open-billing is seldom used by retailers, and recent trade assessments indicate that its use is also declining among terminal market operators and brokers. However, it is still an important pricing method in some agreements.

Incomplete exchange as a pricing institution has evolved in the fresh produce trade due to its compatibility with the high risks of product perishability, as well as unanticipated shortages and surpluses that characterize the industry. This is accomplished by engaging in a partial commitment, or a partial exchange of obligations on the part of both buyer and seller. Incomplete exchange also contributes to orderly marketing by providing buyers nearly full discretion with little risk of product ownership

in making time, form, and spatial purchasing decisions. With the wide variation in product quality that is predominant in fresh produce sales, the range over which a buyer can exercise a rejection option is considerable. By means of a series of incomplete sales exchanges through a number of marketing levels, it is possible for a fresh product item to move through a substantial portion of the marketing channel before being priced.

### **Purchase Contracts**

Formal buyer-seller contracts seldom exist in the fresh fruit and vegetable system due to widespread use of the quasi-incomplete sales exchange methods described above. Although few written contracts are in evidence, informal "contracts" are increasingly employed by some firms (Section IV). A wholesale-retail buying firm may enter into an informal agreement to market a shipper's crop. In these often strictly verbal agreements, quantity is seldom mentioned and price is almost never specified--the prevailing price at crop maturity is understood. By this loose contractual relationship, shippers have some early indication regarding possible market outlets, and buyers have insured themselves a source of product while still retaining the power of rejection if the commodity proves to be of less-than-acceptable quality at harvest.

Use of informal contracts, however, is not widespread. Neither buyers nor sellers are anxious to lock themselves into a fixed price or fixed quantity agreement too far in advance despite considerable mutual complaining by both groups that the opposing group should supply advance information and make more forward agreements. In fact, only a few commitments are made more than a month in advance, and most are made only one week ahead (Section IV). Those commitments that are made more than a month in advance tend to be for non-perishable types of commodities.

The tendency of buyers and sellers to avoid long-range commitments may be explained by the difficulty in establishing future prices. Supermarket produce buyers state that to settle on a price, they would have to be able to forecast retail demand. But retail demand depends on product quality to a great extent in fresh produce, and product quality is a fact that shippers, historically, have not been successful in predicting for more than three to four weeks before harvest. The problem then, as seen by the industry, is classically circular: supply responds to demand, but demand is a function of quality which is largely determined at shipping point levels and is often unpredictable. Hence, in the absence of precise knowledge about produce supply and demand, satisfactory forward contract prices have not historically been reached. This may be changing (see Section IV for elaboration).

### **Price Protection**

Frequently, shippers do enter into one form of advance pricing, albeit of comparatively short duration when contrasted with advance bookings and contractual arrangements in other food marketing sectors. Price protection, a subset of advance pricing methods, refers to produce procurement techniques whereby buyers and sellers agree on the general price levels and volume parameters of a sale perhaps two to four weeks before scheduled product delivery. In exchange for buyer commitment to a certain minimum number of loads of merchandise, the shipper, while generally not specifying the exact price until day of shipment, will at least guarantee the buyer that regardless of market changes the price charged will not exceed a certain level. This level is referred to as the "lid" price.

There is an asymmetry built into this standard pricing practice that lends insights into the location of power in the produce distribution system. If the price moves upward,

the shipper is almost always prevented from billing the buyer at any price higher than the lid price. If the market price should decline, the buyer gets the full benefit of the price reduction. Thus, at least in the short-run, the complete risk of adverse price movement rests with the seller, not the buyer. A few buyers, acknowledging the stress this places on suppliers, say that shippers who respect their price lids on rising markets are compensated by receiving higher-than-market prices on "normal" or declining markets. This type of compensation is not, however, typical. The majority of buyers and virtually all shippers agree that price protection is, in industry jargon, a "one-way street."

Multicommodity shippers have additional maneuverability in this area. Offering or protecting a particular price with a fixed ceiling is less of a problem when the prices of other commodities are available for adjustment. The somewhat arbitrary allocation of overhead costs inherent in any multicommodity enterprise results in greater flexibility in product pricing. As long as total costs are covered, each individual price charged is less of an issue. Therefore, in order to accommodate a buyer's ad program, a multicommodity shipper may be able to lower a given price or maintain a lid price by raising prices or adjusting service levels for other commodities. Although competitors' prices limit the extent to which multicommodity shippers can manipulate their prices in this manner, it is generally conceded that within a certain range, multicommodity shippers enjoy greater price flexibility than shippers handling a single or limited produce line. Moreover, grower-shippers selling their own products have more flexibility to alter commodity prices in this fashion than shippers (or cooperatives) selling the commodities of different growers.

Price protection primarily evolved to accommodate the lengthy sequence of events buyers need to advertise an item at retail. Buyers may begin collecting ideas for possible ads two or three months prior to the scheduled ad based on expected crop conditions, season, historical movement, and other planned store-wide theme promotions. The price lid is agreed upon approximately 15 days to 3 weeks before the ad is scheduled to appear.

Shippers are generally willing and often eager to grant the concession of a maximum price level in exchange for the increased volume movement a retail promotion is likely to mean for their products. Indeed today, the vast majority of advertised produce prices are protected by shippers for almost all supermarkets. A few larger wholesale-retail firms recognize, however, that if it was only a volume requirement that prevented shippers from eliminating upward price fluctuations, then large volume receivers should routinely be accorded price lids on virtually all purchases, advertised or not.

### **Pricing Through Brokers**

In general, brokers act as agents of buyer or seller and occasionally both. Brokers do not fundamentally alter the two basic types of sales, f.o.b. and delivered, they merely act as facilitators and add another element to the pricing process. This element, the brokerage, has not been uncontroversial.

Brokerage rates are calculated either as a percentage of selling price, or more commonly, on the basis of fixed rates per unit (per package, truckload, or carlot). In recent years, those selling on a percentage basis average approximately 6-8 percent of selling price. The per package rate varies somewhat according to commodity and region, but in the early 1990s it averaged approximately 15-30 cents per carton with a few brokers receiving as high as 40 to 50 cents for selected items.

In the produce industry, the seller is traditionally responsible for paying the brokerage. In some cases, where brokers provide entrees into new or previously inaccessible markets, for example, shippers agree that the payment of the fee is warranted. Inevitably, it appears that many shippers find themselves in long inventory positions or in situations where they must promptly sell distressed merchandise. Under such conditions, they often find that reverting to broker use is the most expedient and perhaps the only way to move the product. In instances where a shipper does not support the practice of paying the brokerage commission, the buyer is responsible for paying the commission should he/she desire to use a broker. However, large wholesale-retail buyers, especially those with field buying branch offices, indicated that they are attempting to eliminate "unnecessary" costs by buying direct from shippers whenever possible. The joint effects of these shipper and buyer practices could lead to structural change in the brokerage industry and, in particular, the exit of some small or less well managed firms.

### **Credit and Payment Procedures**

Payment and credit practices constitute an integral part of the total terms of trade in the fresh fruit and vegetable industry. Extending time limits for payments effectively extends credit to buyers; it is a type of loan made by the seller to the receiver whereby the receiver is allowed to operate using the shipper's money. For this reason, timely payment practices are a significant variable in the produce exchange process.

The produce industry depends on three basic sources to assist in evaluating the credit worthiness of potential customers and in arbitrating disputes that result when one party of the transaction feels that the terms of the agreement have been violated. First, wide use is made of two trade directories which serve as valuable sources of trading and credit information for buyers and sellers: the *Fruit and Produce Credit Book* (published four times a year by Vance Publishing) and the *Fruit and Vegetable Credit and Marketing Service* (published semi-annually by The Produce Reporter Company). These publications are referred to in the industry as the "Red Book" and the "Blue Book," respectively. The credit information contained in these directories is supplied by the trade and believed by the trade to be a reasonably accurate, complete, and up-to-date compilation of industry marketing and credit data.

These two directories are the first places an industry practitioner would be likely to turn in making a decision regarding the credit-worthiness of another firm. Decisions regarding how much risk to assume in extending a client credit, especially a new client, are made frequently enough in the fresh produce trade that many operators additionally subscribe to weekly and monthly supplements offered by these trade directories to ensure that they have the most current information available.

The second source of information employed includes the records and/or credit rating services provided by an increasing number of commodity trade associations. Many such groups in the produce industry now compile credit rating lists, especially with references to those firms with reputations for delinquent payment practices.

Finally, the USDA through the authority of the Perishable Agricultural Commodities Act (PACA), assists buyers and sellers in resolving and adjudicating disputes regarding unfair payment practices in the produce industry if necessary. PACA is not a credit rating service, however; generally it only considers payment problems after they have arisen. PACA sanctions range from verbal admonitions to complete license revocation, thus preventing a business from operating in the produce industry.

One provision in the PACA calls for payment of product accounts usually in 10 days unless another payment agreement exists between buyer and seller. The precise average length of payment terms is not known for exchanges that occur exclusively between produce shippers and integrated wholesaler-retailers. However, industry evidence indicates that fresh fruit and vegetable wholesalers in general (including shippers, brokers, and terminal market operators), have payment collection periods that considerably exceed the 10-day guideline.

Most observers of the produce industry report that payment terms have slowed in recent years, essentially extending credit to buying firms for a longer period of time. Moreover, the credit is interest free. During periods of high interest rates and tight capital markets, buyers encourage lenient terms as much as possible. The practice of extending payment terms is now becoming standard for many wholesale-retail receivers and is believed to be a major form of credit. Even for many of the largest firms, payment is seldom rendered in fewer than 10 days.

Many shippers are without established credit policies or terms and are resigned to acceptance of payment at the buyer's convenience. Often, shippers tolerate the SOP of "slow-pay" in order to move products, to maintain customers, or in hopes that the payment situation will improve. These are strategic management decisions essentially based on how badly the seller needs the business and how willing and able he is to wait for payment. This imbalance of market power, weighted in favor of buyers, is further suggested by indications from a minority of trade observers that smaller shipping firms must often wait longer for payments than larger shippers. Forty-five to 60 days is not uncommon.

#### ***D) Inventory Allocation Techniques***

Due to its inherent perishability, fresh produce must be harvested, packed, and shipped often within a few days or even a few hours. Such conditions impose severe constraints on the strategic planning and inventory management function of produce buyers and sellers. When product shortages or gluts occur, inventories become increasingly difficult to manage. Buyers and sellers are forced to make quick decisions in the attempt to remedy long (gluts) and short (shortages) product situations in the "immediate run," while being aware of the likely consequences of current procurement and allocation decisions for long-run trade relationships and system coordination. Many produce marketers have learned that taking undue advantage of a customer or supplier during periods of unfavorable market conditions is apt to be detrimental in future marketing cycles.

#### **Shipper Allocation Techniques Under Short and Long Conditions**

Shippers have developed certain sets of SOPs for the long and short product situations that inevitably develop in fresh fruit and vegetable sales that allow them to continue to service their buyers. Generally speaking, short situations pose easier allocative decisions from the shipper perspective.

A. Shorts. There are two fundamental ways that a "demand exceeds supply" situation may arise and each has a different impact on shipper allocation decisions. The first situation occurs when the rest of the market (e.g. other production regions or even other shippers within the same shipping point market area) are short, usually due to weather conditions, but one shipping point market, (or even one shipper in the extreme

case) is not. This gives the shipper increased bargaining power and is the opportunity shippers hope for. The situation raises few quandaries for the shipper regarding allocative decisions and the rule of thumb is simple: orders placed by regular, loyal buyers receive priority and are filled at whatever price the market will bear. If there is product remaining, "new callers," buyers who generally dealt with suppliers in the now weather-distressed area, may each be apportioned small amounts.

The second shortage situation is more sensitive to handle. This occurs either when the entire market (every shipper) is short, or worse, when the market is short and, for whatever reason, a particular shipper is "shorter." The allocation decision becomes more difficult in this case. Again, a shipper will attempt to serve his regular customers first. Many shippers report that for a "100 percent-customer" (a buyer who consistently fills most of his orders for a certain item with the shipper), they may go out on the open market and purchase product from competitors to assure that their best clients' needs are covered. For most buyers, however, a pro-rating occurs whereby each regular customer gets more variable percentage (generally linked to the proportions of his normal purchases) of the reduced supply. The essence of this procedure is to attempt to provide all customers with at least some product on the shelf. Those customers who have assisted shippers move long-crop situations in the past or in other ways proved themselves easiest to work with (e.g., not "price buyers") are more likely to be assured product during shortages.

Multicommodity shippers, especially those that are geographically diversified, are less likely to get into the second shortage dilemma for two reasons. First, they may be able to ship the same product from another production area unaffected by the weather problem. Second, they are often able to persuade the buyer to substitute another item for the short commodity. This strategy is especially prevalent for minor fruits and vegetables that are believed to have high cross-elasticity's of demand. Often, different sizes and varieties of the same commodity are substitutable as are several related commodities within major project groupings, such as soft fruits, citrus fruits, exotic items, leafy vegetables, and "cooking" vegetables.

Shippers who possess thorough knowledge of their customers' operations, their corporate merchandising strategies, as well as the personal predilections of wholesale-retail buyers and inspectors, are able to use that knowledge in making product allocation decisions. For example, when a product shortage is not so much of total quantity as it is of the availability of a given quality. In these cases, many shippers direct specific lots of different quality products to designated types of buying firms. Buying firms emphasizing retail bulk merchandising programs may be less tolerant of certain quality defects, for example, than would firms equipped with extensive reworking facilities for prepacking lines. Over time, quality criteria are detected and duly noted. When shortages of product or uneven quality conditions arise, some shippers are able to resolve product allocation problems by discriminating among buyers' different quality tolerances.

B. Longs. Bumper crops and long inventory positions can be less than desirable situations for shippers, both as individual firms and collectively as an industry. Moreover, they can be especially undesirable for growers. During long crop situations, shippers will often handle growers' products on a consignment basis, transferring most of the risk to growers. Although regular trade association intraseasonal promotions take place and assist individual shippers in adjusting long-supply situations, they are little help in managing an unanticipated long inventory. For these short-run product gluts, the individual shipper relies primarily on his own resources to initiate special promotions or offer special deals to buyers.

Although many shippers regularly sell a portion of their product to terminal market receivers, the proportion of terminal market sales as a percentage of a shipper's total sales usually increases during long product situations. When long inventories become severe enough, shippers will often consign product to wholesale commission merchants at terminal markets. However, many shippers are reluctant to use consignment sales due to the wide variations in charges deducted by terminal market receivers. However, recognizing that sooner or later they will be forced to consign, most shippers so strive to maintain good relationships with at least one terminal receiver in each market.

Another example of the diversity of coordination mechanisms used in the fresh produce trade is a practice known as "rolling the product." When perishability dictates that a product must be shipped from shipping-point storage facilities, some sellers will ship without a buyer or firm destination and hope a buyer for the product can be found in-route. This situation occurs considerably less frequently today than in the past because of its risky nature, but is still evident in some commodities like potatoes. Rollers are predominantly used today as a last desperate resort to remedy long product situations. The risk is high either that a buyer will not be found before excess product deterioration sets in, or that the only buyer available realizes the shipper's vulnerable position and thus is able to negotiate a very low price.

Long product situations generally are synonymous with low prices and so encourage sellers to investigate alternative marketing outlets, including the processing market. It is clear that when fresh product prices are low enough, and if product variety permits, shippers carefully weigh the possibility of diverting some fresh product to processing channels. It is primarily for this balancing purpose that a very few shippers also maintain processing facilities. This appears to be somewhat more prevalent for some of the conventional processing commodities (e.g. potatoes, citrus, apples, etc.), but processing outlets are also becoming more feasible for such commodities as lettuce as a result of the advent of "processed fresh" produce for salad bar and precut uses.

### **Buyer Allocation Techniques Under Short and Long Conditions**

Short or long conditions are likely to characterize at least some produce items virtually all the time because of the large number of products typically inventoried by supermarket product buyers. As a result, procedures have evolved to cope with these regular, but always unanticipated, imbalances.

Terminal markets assist in balancing supplies for many buyers. For example, if a buyer immediately requires 200 extra cases of a commodity to fill store orders for an advertised item the following day and he/she does not have adequate time to order and receive a new load from a shipping point, he/she relies on supplies from the terminal market. In fact, because many supermarket buyers recognize the paramount importance of the terminal market in allowing them to balance inventories with more precision, many buyers inform several terminal market receivers of upcoming promotion items as a standard practice. This signal allows the terminal market merchant to have an adequate supply of that item should the chain need to place an emergency order. For the additional risk that this procurement SOP has shifted from the retailer to the terminal market operator, the retailer pays in higher prices.

Some retail buyers will go one step further by placing an order directly with a terminal market firm to fill a small proportion of their requirements. This also alerts the terminal market receiver to an impending promotion, while giving him a small percentage of the business to assure continued cooperation. Although precise data are not available, it appears that those supermarket buying offices located near a major terminal market

tended to purchase more of their total produce needs from the terminal than other buying offices. Terminal markets are insurance policies for supermarket buyers in short markets and when supermarkets are running advertisements on given items, allowing buyers a wider margin of error in their direct procurement program.

Long situations are more easily handled by wholesale-retail buyers than by shippers. Buyer response is considered here with respect to long situations both in the shipper's inventory and in his own wholesale-retail warehouse.

A. Longs. Abundant supplies place the buyer in the felicitous position of being able to offer shoppers many fruit and vegetables, usually at low prices. As a rule in these cases, shippers call the buyer, often far in advance, facilitating planning and insuring targeted margins with low price offers. When long situations prevail, it is buyers who have much of the control in the bargain exchange. However, strong shippers usually will not accept "reserve options" which may place the shipper in a precarious situation of handling additional risk, (i.e. the buyer ordering several loads for immediate delivery and reserving several more for future delivery in case he needs them).

Although planning special promotions is the most often used technique for retailers to "sell through" an abundant crop, large promotions often require three to four weeks coordination (Section IV). When an individual shipper discovers a long position and the lead time for a major promotion is not available, the buyer, often working through his field buyer, has several other means to accommodate the shippers: 1) initiation of an in-store promotion without media advertising; 2) expansion of retail display space including end-aisle displays; 3) increasing store signage to promote customer awareness; and 4) distribution of in-store or neighborhood flyers. These short-run techniques are regularly invoked by buyers when a shipper offers a special deal to them too late to be included in a regular ad program or to assist favored suppliers who have helped with procurement problems in the past.

The long product situation where the buyer is faced with his own long inventory is generally quickly and relatively easily remedied. Four basic SOPs predominate. First, the majority of chain companies will adjust to long warehouse inventories by pro-rating each of their stores with a proportionate increase over their normal orders. This is the essence of "forced distribution" as practiced by most chain organizations. Second, many chain organizations allocate extra merchandise only to high volume stores and may authorize special price reductions for those units. Thus, chain produce buyers primarily worry about making an order error in one direction--under ordering since over orders are systematically distributed via forced distribution techniques. The same is not true of voluntary and cooperative wholesale buyers who are both unable to arbitrarily increase the volume of their member deliveries. Instead, the telephone sales people employed by these wholesalers must make an additional effort to promote long items during their daily conversations with produce managers.

Third, occasionally a buyer will be so long on a particular item that the only remedy is to sell the item outside the organization. This sale would most likely go to a trusted terminal market merchant first, to a local broker second, or even to a competitor as a last resort. Finally, buyers may alleviate their long positions by simply refusing to accept the product. Either because the market price experienced a decline between the time of purchase and delivery (e.g., so-called "market rot"), and/or because the buyers became aware of an over-supply in their warehouse or stores, buyers may instruct their inspectors to find a legal way to reject produce because of poor quality. This action provides an opportunity for excess product to work its way through the buyer's internal distribution system.

**B. Shorts.** Short product situations are anathema to produce buyers. An out-of-stock advertised item is especially feared. A buyer's response to a short situation depends on its origin. There are essentially five ways a short supply can be created: 1) a disastrous year in all production areas, recognized by the buyer in advance of purchasing needs; 2) an unexpected shipping point problem (e.g. weather) not anticipated by the buyer; 3) a transportation problem en route; 4) a sudden, unexpectedly large retail movement; and 5) an ordering error.

In case (1), a widespread crop failure is likely to affect all firms in approximately the same way. This permits the buyer to raise price, reduce display area, use other merchandising techniques or, occasionally substitute a related item (e.g. peaches for plums) and not regard the shortage as a major problem since it is probable that his competitors will have little to none of the item either. In the other four cases, however, the buyer will be held responsible for any retail shortages. Consequently, he must take quick action to secure additional product. The most common options available to him in order are to:

- (1) Immediately contact a "core" supplier (perhaps one who owes him a favor) and attempt to secure the additional produce needed by the fastest transportation mode available.
- (2) Attempt to procure the product from a regular supplier on the local terminal market which could often include a broker. (Exercising this option generally entails paying considerably higher costs to terminal market receivers who assumed high risks in maintaining an inventory of that product for such situations).
- (3) Begin calling "fringe shippers" especially if located nearby, with whom the buyer typically does little business, in an attempt to fill at least a portion of his orders.
- (4) "Short the stores." That is, reduce retail orders by whatever amount necessary while attempting to maintain some product on all shelves. If the item had already been committed to a newspaper advertisement, any of several additional steps may accompany this prorate reduction:
  - (a) no increase in display space;
  - (b) no expansion of in-store signage;
  - (c) replace the position or size of the featured item on the ad page; and/or,
  - (d) remove the "produce insert" from local neighborhood flyers.

The delicate balance that typifies inventory management and ordering procedures at all levels of the vertical produce system is one of the system's outstanding characteristics.

### ***E) Transportation Requirements***

In the fresh fruit and vegetable industry, quick delivery requirements dictated by high product perishability, as well as long distances often separating production areas from major consumer markets, combine to make transportation a key variable for the successful operation of both shipping and receiving firms. Indeed, for certain air shipments, transport charges can reach 60 to 70 percent of retail product value for some

east coast markets destinations. It is timely and economical transportation that allows fresh produce to be distributed on a national market basis.

Responsibility for the transport of fresh produce from shipping to receiving point rests, in most cases, with the buyer. Since over 90% of fresh produce is carried in over-the-road trucks (Table 2.1) by widely dispersed and highly fragmented independent truckers, arranging for deliveries can be a time consuming activity. This holds true for other trucking types, such as common carriers as well. Receivers seem to tolerate this inconvenience because of cost shifting and greater certainty of proper transportation arrangements.

**TABLE 2.1**  
**Fresh Fruit and Vegetable Domestic Shipments,**  
**Volume and Percentages by mode:**  
**1982, 1992**

Mode	1982		1992	
	1,000 cwt	% of total	1,000 cwt	% of total
Truck	427,849	87.8	527,812	90.8
Rail	38,930	8.0	30,801	5.3
Piggyback	20,186	4.1	19,017	3.3
Air	256	.05	1,970	.03
Boat	196	.05	1,970	.03
<b>TOTAL</b>	<b>487,417</b>	<b>100.0</b>	<b>581,559</b>	<b>100.0</b>

Source: USDA, Fresh Fruit and Vegetable Shipments, FVAS-4, Calendar Year 1982 and 1992.

### Buyer Transportation Requirements

Buyers have five transportation prerequisites. It should be fast, reliable, accommodating to their handling preferences, capable of delivering premium quality, and least-cost. In fact, it is primarily for these reasons that trucks have continued to be the preferred mode of transport by the produce industry. Indeed, although many logistics experts in the early 1980s had projected vast increased utilization of "piggyback" or trailer-on-a-flatcar (TOFC) produce shipments by the 1990s due to its expected efficiencies, trucks have continued to gain ground over all other modes of transportation (Table 2.1), while the piggyback potential has not yet been realized.

Reliability of deliveries is most often the variable of greatest importance to receivers. If arrivals are consistent and predictable, buyers are able to place orders with confidence that they will be able to fill store orders as needed without unnecessarily building inventory. Further, precise arrival times facilitate labor scheduling. Produce warehouses generally do not have sufficient space to receive deliveries from shipping points at the same time that orders are assembled to ship to retail stores. Moreover, if a truck arrives late there is rarely time to give the product as thorough an inspection as would occur otherwise. Many buyers are willing, therefore, to sacrifice a certain amount of delivery speed for an increased ability to predict exact arrival times.

Despite the critical nature of the timing and dependability of transportation, few produce receivers have integrated into transportation activities. Several years ago, there appeared to be a movement toward integration when a few retailers began to hire trucks on a year-round, fixed-rate contractual basis. This practice did not become widespread,

however, probably due to truck and railroad deregulation and the development of truck surpluses in major production areas.

Instead, the majority of receivers rely on external transportation agencies. The buyer may delegate all or part of his responsibility for transportation arrangements to an outside agency. Buyers often use produce brokers, for example, because of brokers' abilities to secure transportation. Indeed, this is the reason many produce brokers are jointly truck brokers. Likewise, shippers who have their own internal transportation departments and trucks may, during certain short market situations, have an advantage over those that do not. Although these shippers may arrange transportation on one-fourth to one-third of all their shipments (either through use of their own trucks or those from another transport firm), it is this service that often leads the buyer, when he is especially pressured or when truck availability is tight, to their firm. Irrespective of whether the receiver dispatches the trucks or delegates authority to someone else to perform this function, he is, in effect, trading some control by not owning his own trucks for the purpose of shifting certain short-run transportation related costs and risks away from his company. This argument holds for the shipper as well.

Transportation of produce at least-cost has three fundamental requisites itself. Efficient operation of transportation equipment and related technologies is especially essential in products where transportation cost is a significant part of total product delivered costs. It can often account for 25 percent of delivered price on the east coast. Products must also be carried in full truck (or rail car) loads to minimize per unit costs. Finally, the number of pickup and delivery points must be minimized.

Many receivers are not large enough to justify "straight-load" shipments of some single commodities, and no receiver is large enough to justify them for all items and still maintain acceptable inventory levels. Therefore, minimizing total transportation cost involves a continual struggle of balancing the requisite of carrying full loads with the requisite of minimizing the number of stops. To meet the condition of a full truck requires either a mixed load (potentially requiring truck stops at several shippers) or a split load (requiring stops at several receivers).

Often forced to make this trade-off, buyers transmit their orders to a transportation agency who may, at least initially, absorb the costs involved in locating trucks and arranging the complex logistics of pick-up and delivery. In so doing, buyers eliminate truck investment and maintenance costs, and shift certain additional costs and risks associated with product damage during loading, unloading, and in-transit to transporters, brokers, and shippers.

Increasing the number of produce deliveries per week increases product turnover. The wholesale-retail costs associated with inventory maintenance and losses due to product deterioration are thereby reduced. This type of precise scheduling, however, imposes tighter coordination standards on shippers, brokers, and transport agencies charge with meeting the schedules. For non-storable products, harvesting and packing crews must operate with greater precision to meet the strict shipment sequences required of shippers by retail customers. Within the limitations imposed by the products' physical properties, this can mean holding the products, whether in the field or in the packing house, until the moment the retailer needs it -- "just-in-time" delivery. Brokers and trucking agencies must exercise more exact monitoring of the organization and activities of their transport networks than in the past. Some receivers, for example, impose rigid time schedules for unloading activities. Part of the resulting reduction in wholesale inventory costs is shifted backward in the distribution channels, chiefly to shippers. As an increasing number of supermarket chains move toward receiving riper fruit from

shipping points, the need for rapid delivery systems and optimum coordination has increased.

Buyers are able to transfer certain additional costs and risks to truckers as a result of the unlicensed status of truckers. Specifically, truckers are not included under the PACA authority so disputes arising over the proper responsibility for any product deterioration are not arbitrated by any official body, but instead are often summarily decided by the receiver. Some receivers simply deduct claims for product damage from the wages paid to the trucker. Truckers contend that this practice occurs regardless of where the fault for the deterioration lies, primarily because the trucker has no recourse. The lack of formalized rules with respect to some trucking practices, however, gives truckers certain flexibilities. There is, for example, no industry-wide SOP for late truck arrivals.

Some firms, particularly multicommodity shippers, offer substantial advantages to buyers for the above reasons. These shippers provide an alternative to the inventory-transportation trade-off. They furnish their own mixers. That is, for the buyer who does not have the capacity to accept a straight-load of a minor item, these shippers are able to fill trucks with a number of other commodities. A mixed load of several different items (occasionally as many as 10-12 when the requirements for temperature and relative humidity are right, or when a compartmentalized van is employed) consolidated in one location eliminates the need for many stops to assemble a mixed load. Such consolidation may save several hundred dollars in overall transportation expenses on a single load. Moreover, these multicommodity shippers often have internal transportation departments, further facilitating the transportation problems of receivers.

### Section III: STUDY METHODOLOGY AND RESPONDENT PROFILE

The survey conducted as part of the empirical component of this research employed a two-part methodology: an industry-wide mail questionnaire and face-to-face personal interviews with produce industry executives, both prior and subsequent to the questionnaire mailing.

A ten page mail questionnaire was sent to the produce director or head produce buyer of every supermarket chain in the U.S. in February 1993. A total of 235 chains were identified. The list of companies and buyer names was derived from the Chain Store Guide's (1991) list of the top 200 supermarket companies and from the retail membership of the Produce Marketing Association (PMA). The design of the questionnaire as well as the mailing procedures followed conformed to the Total Design Method (TDM) as established by Dillman (1978).

The personal interviews had two objectives. First, a "task force" of industry executives was identified to ensure that the mail questionnaire solicited the types of information that would be of optimal use and benefit for the industry. This group of executives reviewed several early drafts of the survey instrument before its mailing. Second, once the preliminary analyses of the survey results were conducted, interviews were held with produce buyers and shippers to assist with the interpretation of the findings as well as to allow for industry reaction and perspectives regarding the initial survey results.

#### A) Response Rate

One hundred usable surveys were returned from the 235 initially mailed, representing 100 different supermarket chains (Table 3.1) and an overall survey response rate of 44 percent. Fifty percent of the surveys were received within three weeks, and all had been received at the end of eight weeks. Seventy-seven of the respondents are represented in the top 200 supermarket chains as listed in the *Chain Store Guide* (CSG) (Table 3.2). These 77 companies accounted for \$128.8 billion in revenue in 1991 or 61 percent of total U.S. chain store sales (*Chain Store Guide*). Eight of the top ten chains and eighteen of the top twenty-five chains are represented in our sample. However, source of sales for the remaining 23 respondents were not listed in the CSG: thus, it can be conservatively estimated that **the total number of respondents to this study represent between two-thirds and three-quarters of supermarket chain produce sales.**

TABLE 3.1  
Survey Response Rate by Week

Weeks After Initial Mailing	Number of Surveys	Percent Returned
One - three weeks	51	50
Four - five weeks	38	38
Six or more weeks	11	12
<b>TOTAL</b>	<b>100</b>	<b>100</b>

**TABLE 3.2**  
**Rank<sup>1</sup> of Responding Chains: 1990 Sales**

<b>Firm Rank By Sales Revenue</b>	<b>No. of Responding</b>
Top 10 chains	8
11-25	10
26-50	18
51-100	13
101-150	12
151-200	16
<b>SUB-TOTAL</b>	<b>77</b>
Smaller than Top 200	23
<b>TOTAL</b>	<b>100</b>

1As ranked by the Chain Store Guide 1991

### *B) Individual Respondents*

The vast majority (88 percent) of respondents reported their primary work location as company headquarters. The remaining 12 percent indicated working in a division office. The majority of individuals responding to the survey were senior level produce executives. Nearly two-thirds of respondents held Vice-President or Director positions, while the remainder reported holding various buying or merchandising support positions (Table 3.3).

**TABLE 3.3**  
**Job Titles and Buying Responsibilities of Survey Respondents**

<b>% of Respondents</b>	<b>Job Titles/Responsibility</b>
63%	<b>Vice President or Director of:</b> Produce, Sales and Procurement, Produce Operations, Produce/Floral, Produce & Floral Merchandising, Produce Operations, Fresh Fruits & Vegetables/Floral, Produce/Floral, Produce Merchandising & Operations, Produce Procurement/Merchandising, Produce & Bakery, Sales & Marketing, Produce Purchasing, Produce/Bulk Food/Floral
19%	<b>Buying Positions:</b> Produce, Assistant Buyer, Senior Produce Buyer, Head Buyer, Produce Supervisor/Floral Buyer
18%	<b>Merchandising and Support Positions:</b> Produce Merchandiser, Category Manager, Produce Supervisor, Produce Division Manager, Produce Product Manager, Produce Coordinator, , Produce/Frozen/Dairy Merchandiser, President, Produce/Floral Supervisor, Produce Operations Manager, Manager of Procurement Fruits/Vegetables, Produce/Horticulture Supervisor, Senior Manager,
<b>TOTAL 100%</b>	

The average number of years respondents reported working for their current employer was 17.4 years (Table 3.4). Only one-third of respondents had worked for their current employer for fewer than ten years. By contrast, in a parallel research study, grocery buyers reported working for their present employer 19.9 years, 2 1/2 years longer than their counterparts in produce (Fredericks and McLaughlin 1992).

**TABLE 3.4**  
**Length of Employment with Current Firm**

<b>Employment Tenure</b>	<b>% Responding</b>	
	<i>mean = 17.4 years</i>	
20 years or more		49%
10 - 19 years		17
5 - 9 years		16
1 - 4 years		16
Less than 1 year		1

Slightly less than half of respondents (45%) reported having fewer than 5 years of experience at their current produce position, while only 10 percent indicated a long tenure of 15 years or more (Table 3.5).

Although respondents reported a relatively long tenure with their current employer, the average number of years reported in their current produce position was only 7, suggesting that the majority of respondents have held several positions within their current company. Their grocery buying counterparts reported holding their current positions 7.4 years, only slightly longer than produce buyers.

Thus, in general, produce buyers reported a shorter employment tenure at their supermarket companies, yet about the same number of years in their current position as their grocery counterparts. This suggests that produce buyers are able to rise to their positions more quickly than are grocery buyers by perhaps full two years. It is possible that grocery buyers need, or at least are perceived to need, more experience and/or training before assuming the grocery buyer title.

**TABLE 3.5**  
**Years in Current Position**

<b>Years</b>	<b>% Responding</b>	
	<i>mean = 7.0 years</i>	
15 years and over		10%
5 - 14 years		45
3 - 4 years		22
Less than 3 years		23

### C) Personal Background

The mean age of the produce executives in our survey 46.1 years (Table 3.6), slightly older than the average age of 44.6 years for grocery buyers (Fredericks and McLaughlin 1992).

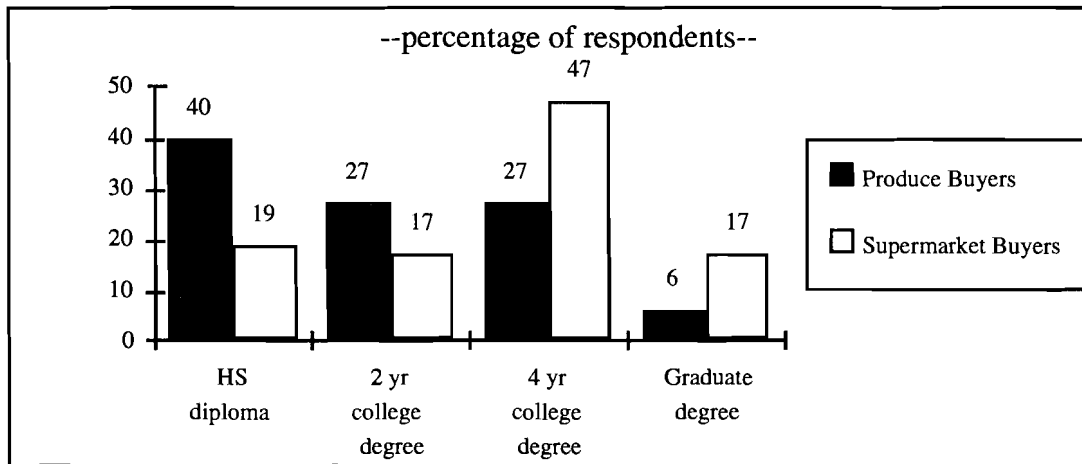
Further, produce buying departments continue to be male dominated: only 2 percent of survey respondents are female. This finding is consistent with the results from other supermarket buyer research (Fredericks and McLaughlin 1992) where only 3 percent of grocery buyers were found to be women.

**TABLE 3.6**  
**Age of Survey Respondents**

Age	% Responding in Category
55 or older	26
45 - 54	22
35 - 44	43
25 - 34	9
<b>TOTAL</b>	<b>100 %</b>

Forty percent of produce executives reported having a high school diploma (Figure 3.1) and one-third a four year university degree. This represents a stark contrast with grocery buyers of whom fully two-thirds have earned university degrees. Further, produce executives with a high school education tended to be employed by their employer longer than other produce executives with college degrees (19.9 years vs. 16.5 years) and have held their current position over twice as long as those with a college degree (16.5 years vs. 6.9 years).

**FIGURE 3.1**  
**Level of Education Obtained by Grocery and Produce Executives: 1992-1993**



Source: Fredericks and McLaughlin 1992

In terms of other, less formal education ninety percent of respondents indicated receiving their produce buying training on the job. Twenty-five percent of respondents also indicated industry seminars as being an important component in their produce training process.

## Section IV: EMPIRICAL RESULTS AND STRATEGIC IMPLICATIONS

### A) Produce Buying Organization

Survey respondents reported a total of 5.8 produce buyers per retail company. An almost equal number of buyers was reported in both headquarter and regional locations. In studying supermarket dry grocery buyers, Fredericks and McLaughlin (1993) reported an average of 4.6 buyers per supermarket chain for all perishable categories combined, but this number pertained only to buyers at headquarters locations. Since, in the case of produce, many buyers are located in divisions and/or in production areas (Table 4.1) these numbers are roughly consistent.

The number of buyers at each job location varies widely and, as expected, the larger "national" chains report the majority of buyers in all categories, especially for divisional and production areas. In fact, the "mean number of buyers per location" in Table 4.1 maybe misleading when considering industry structure. That is, when chain types are broken down according to "regional" versus "national" status, it becomes clear that although both company types have approximately 2.4 produce buyers at the headquarter location, the so-called "national" chains have many more division buyers than the regionals (Table 4.2). Indeed, almost by definition, regional chains are usually confined to one or a few regions only. Moreover, a very small number of "national" chains employ a considerable number of field buyers--in fact, over 16 per company--but according to the firms responding to this study, regional chains do not use field buyers at all. Although the internal organization of produce buyers, merchandisers and/or category managers differs considerably by company, a "prototype" configuration is found in Exhibit 4.1.

**TABLE 4.1**  
**Produce Buyers by Job Location**

<b>Job Location</b>	<b>Mean Number of Buyers</b>	<b>Range of Buyers</b>
Headquarter	2.2	0 to 7
Division/Regional	2.3	0 to 27
Production Area	1.3	0 to 27
<b>TOTAL</b>	<b>5.8</b>	

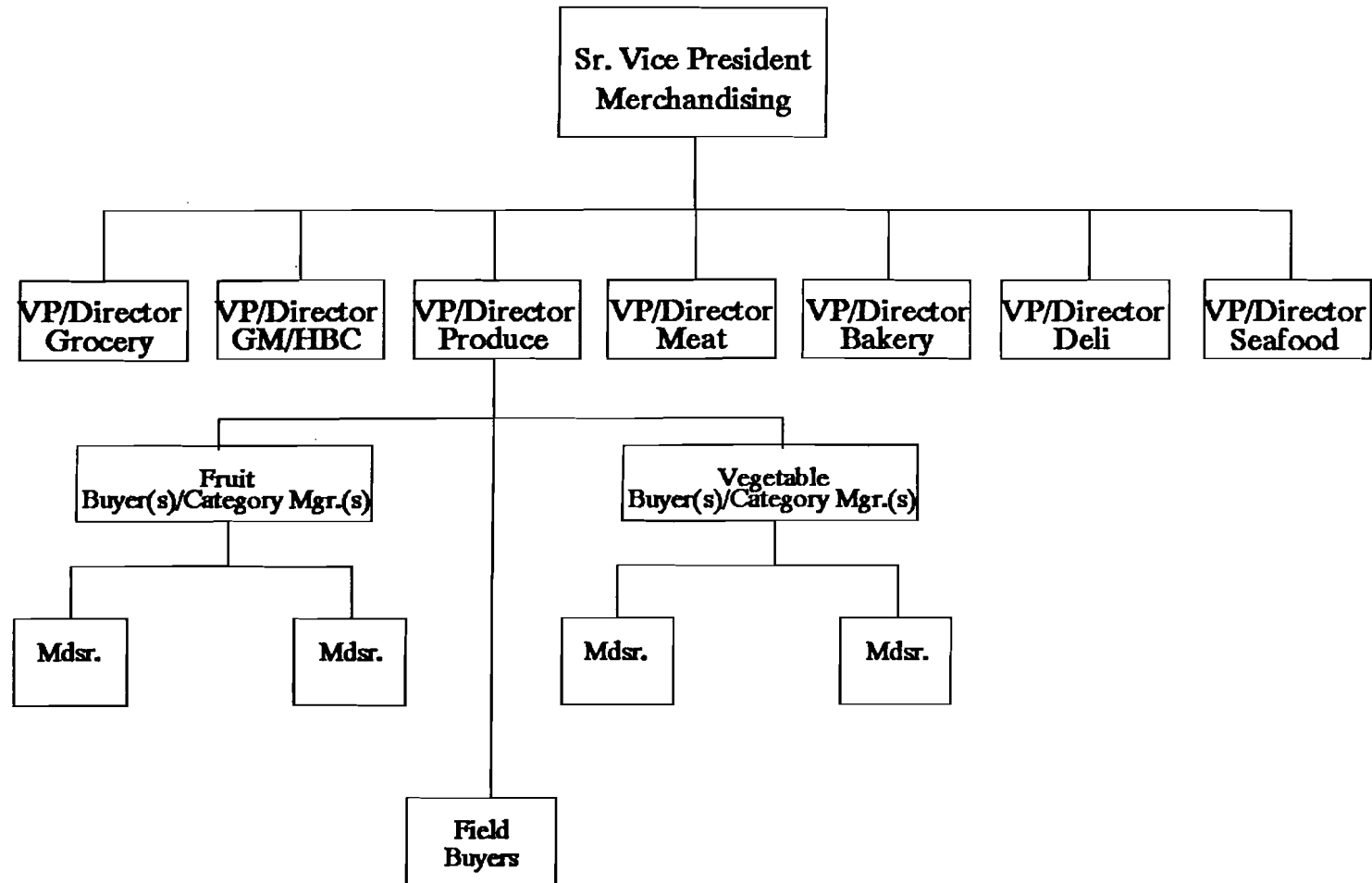
**TABLE 4.2**  
**Produce Buyers by Job Location: Regional vs. National Supermarket Chains**  
**--Firm Average--**

<b>Chain Type</b>	<b>Headquarter</b>	<b>Divisional</b>	<b>Production Area</b>	<b>TOTAL</b>
National <sup>1</sup>	2.4	7.0	16.2	25.6
Regional <sup>2</sup>	2.3	2.0	0	4.3

<sup>1</sup> Six retail firms with stores in more than 12 states <sup>2</sup> All other firms

# EXHIBIT 4.1

## Prototype Supermarket Produce Department Corporate Organization



## Buyers' Responsibilities

Although generally all produce buyers perform similar functions the emphasis is quite different. Once again, jobs vary according to firm size. For example, produce executives from smaller firms (those with annual sales less than \$300 million) may be described more fairly as "merchandising" specialists, spending relatively more time developing marketing/merchandising plans and conferring with store personnel than their large chain counterparts (Table 4.3). In contrast, buyers employed by firms with annual sales greater than \$1.5 billion appear to be more "procurement" specialists, spending the greatest part of their time meeting and conferring with suppliers. Thus in this sense, they are like their grocery buying colleagues. However, the analogy cannot be extended too far: Fredericks and McLaughlin (1992) reported that grocery buyers devote 13 percent of their time to reviewing new items, a task, that takes relatively little time for produce buyers, not surprisingly, given the far fewer number of new items in the latter category (Table 4.3).

**TABLE 4.3**  
**Allocation of Buyers' Time by Firm Size**

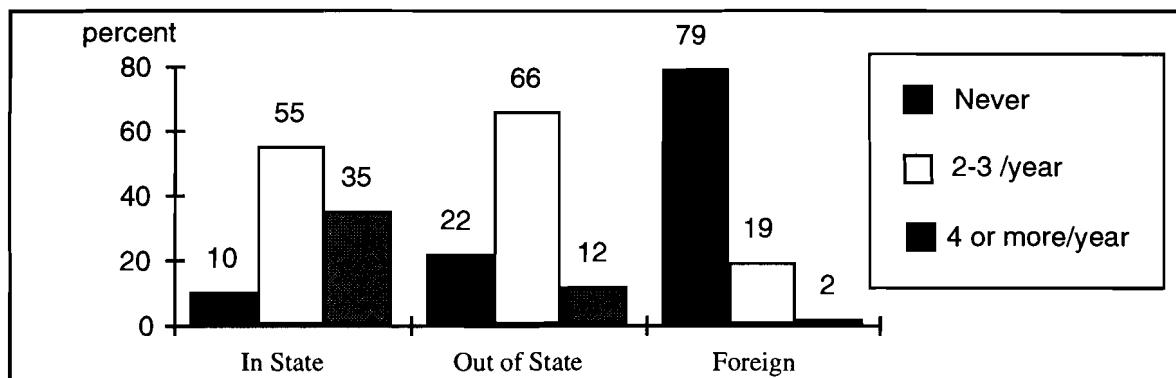
<b>Activity</b>	<b>Firms with sales &gt; \$1.5 billion</b>	<b>Firms with sales &lt; \$300 million</b>	<b>Grocery Buyers <sup>1</sup></b>
	--percent--		
Review new item	5	4	13
Development of mkt/merch plans	10	16	18
Ordering, pricing invoices	20	17	25
Meeting/talking w/ suppliers	36	26	33
Conferring w/quality control/warehouse receiving	12	10	NA
Conferring with stores	13	22	3
Other	9	5	8
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

<sup>1</sup> Source: Fredericks and McLaughlin 1992

In keeping with the high percentage of time spent meeting and talking with suppliers, ninety percent of survey respondents reported that they visit in-state growing/packing operations two or more times per year. Over three-quarters of produce executives indicated visiting out-of-state growing/packing operations at least several times each year. Foreign visits are much less prevalent however; only 21 percent of respondents reported traveling to foreign countries to visit growing/packing operations (Figure 4.1).

On the other hand, a very small proportion, 10 percent of respondents, reported never visiting in-state operations while one-quarter indicated never visiting out-of-state shipping or packing operations.

**FIGURE 4.1**  
**Frequency of Contacts with Growing/Packing Operations**  
**--trips per year--**



### Strategic Implications and Perspectives

- *Results to the current survey suggest that the "gap," at least in the physical sense, may be widening between produce suppliers and supermarket buyers. The mean number of buyers per company has not changed substantially in many years--indeed, some produce directors report that new technology allows them to operate with fewer buyers than in the past--despite the threefold explosion of new items in the produce department since 1960. As the much greater number of items in today's produce department competes for a portion of the buyer's fixed time, each is allocated less. Moreover, only a handful of the largest companies have field buyers, underscoring the expansive distances between the supplies in production areas and the retail buyer.*

*Amplifying this trend, is the overall increase in concentration of wholesale and retail supermarket companies that has continued over the last three decades. As these companies consolidate their operations, the number of total produce buyers contracts; only one produce director is needed when before there were two. Fewer buyer-seller contact points remain in the system. Of course, the implication of both of these trends is that suppliers of the traditional, principal commodities to the produce department are now competing for an increasingly scarce commodity themselves: the buyer's time.*

- *Responses from our survey indicate that produce buyers from larger chains (Table 4.3) spend considerable more time working with suppliers but considerably less time conferring with their own store personnel than do smaller chains. A number of industry practitioners offered their views on this result. One suggested that compared to smaller chains the produce buyers in the larger chains are more influenced by the policies of their grocery buyer colleagues to push for new distribution approaches with suppliers such as "Efficient Consumer Response" and other of the latest initiatives in the grocery industry .*

*Others indicated that the larger buyers do not have to be as concerned with store level activities because of the greater attention which they receive from large suppliers who, it was suggested, offer more extensive levels of service and merchandising to large company stores than they do to smaller companies. Several smaller grower/shippers furthered the view that larger buyers may align themselves more often with larger suppliers because, they pointed out, it is frequently more difficult for a small or medium*

*supplier to meet the large volume requirements of the larger supermarket companies--in particular during a major ad. In essence, they claim, the larger retailers prefer to do business with suppliers who can fill their needs with only "one-stop."*

*From quite another direction, some in the industry believe that the additional time that buyers from smaller chains report spending on store-level activity may simply be explained by the extra attention that many smaller companies devote to merchandising programs. They allege that smaller companies are generally more creative and develop more attractive produce presentations.*

- *Although most buyers believe that their current level of visiting production areas and growing/packing operations is optimal (Figure 4.1), a few shippers pointed out that such visits, again, tend to be skewed toward only the largest shippers. Yet, smaller grower/packers generally benefit from such retailer visits as well, not simply from improving relationships, but also due to the opportunity to exchange first-hand information with the retail customer in a mutually beneficial way.*

## *B) The Buying Process*

### Source of Produce

Taken together, survey respondents indicated that 80 percent of all produce was shipped directly from the production area to supermarket buyers, whether the transaction was actually consummated by a shipper's sales agent or a broker (Table 4.4). Twenty percent of all produce originated from a terminal market wholesaler or other types of commission merchants. Interestingly, despite the prevalence of a greater number of the major terminal markets on the East Coast, the origin of produce purchases does not differ markedly for East Coast versus West Coast supermarket firms .

However, retail firms with annual sales over \$1.5 billion tend to receive a much greater amount of their produce shipped direct, approximately 93 percent. In contrast, firms with annual sales of less than \$300 million receive only about two-thirds of their produce shipped directly, with the other third originating from various types of terminal market wholesalers (Table 4.4 ).

**TABLE 4.4**  
**Sources of Supermarket Produce, 1993**  
 --percent of total purchases--

Firm Type	Grower- Shipper	Broker	Terminal Market	Total
	-- % --			
All	53	27	20	100
East coast	54	27	19	100
West coast	52	25	23	100
Greater than \$1.5 B in annual sales	64	29	7	100
Less than \$300 M in annual sales	42	23	35	100

Irrespective of firm size, however, the results of this study underscore the declining importance of the terminal market to the supermarket industry over the past twenty years. Whereas fully one-third of all produce destined for supermarkets passed through a terminal market in 1973, this number fell to 20 percent by 1993 as direct purchasing from source became more important (Table 4.5). During this time, the share of total produce procurement whose transaction was facilitated by brokers has remained remarkably stable.

Although, in part, ever-larger supermarket companies help explain the shift to more direct purchasing, the continued expansion of retail store size has not led to the huge increases in "direct store deliveries" predicted a decade ago. In 1992, for example, 91 percent of all produce passed through the supermarket's warehouse, whereas only 9 percent was delivered directly to stores (*Supermarket Business* 1992). As a consequence of supermarket companies taking greater control of the entire procurement system, many terminal markets have re-oriented their businesses toward niche opportunities and the food service industry.

**TABLE 4.5**  
**Sources of Supermarket Produce, over time**  
**--percent of total purchases--**

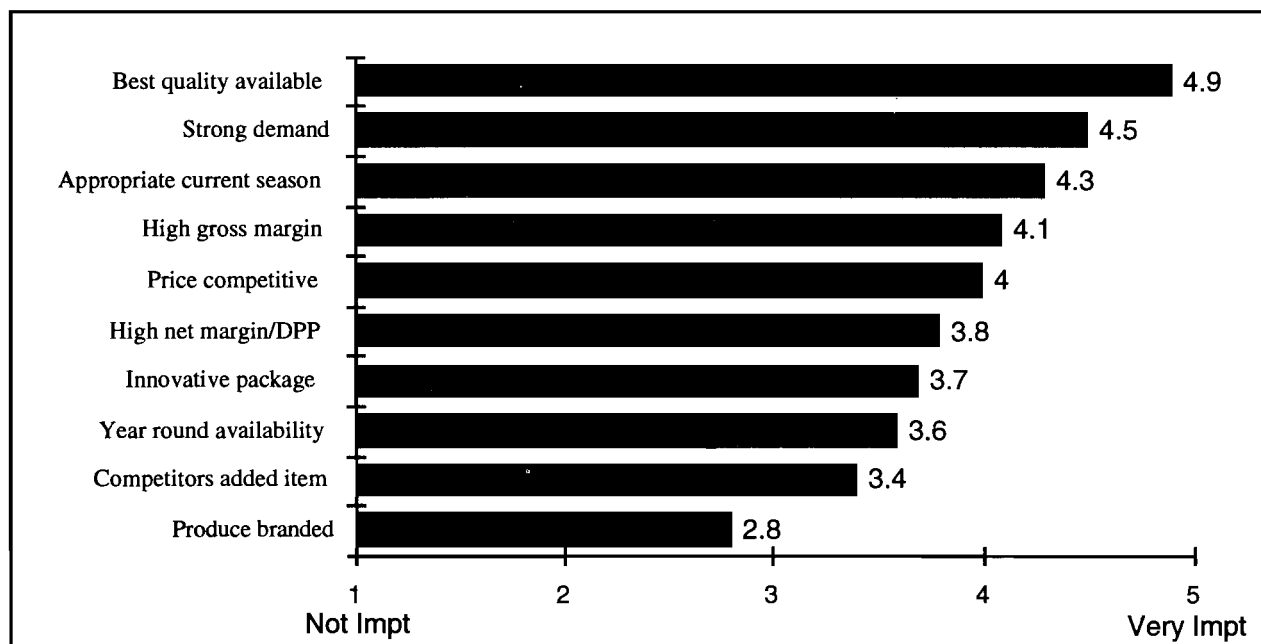
Year	Grower/Shipper	Broker	Terminal Mkt
1973 <sup>1</sup>	39.0	28.5	32.5
1982 <sup>1</sup>	40.9	33.9	27.0
1993	53.0	27.0	20.0

<sup>1</sup> "Buying Practices of Retail Produce Executives," Marcom Research, 1973; "How Do You Measure Up," Marcom Research, 1982

### Importance of Product Attributes

When presented with a list of key produce attributes, produce executives reported "quality" as the most important product attribute they consider when purchasing produce. Strong demand, appropriateness for season, high gross margin and price competitiveness were also rated as very important characteristics (Figure 4.2). Despite recent attention devoted by some to "branded produce" (*Supermarket Business*, 1992), having an item branded was given the lowest rating among all the product attributes evaluated by the executives when they consider purchasing a produce item.

**FIGURE 4.2**  
**Ranking of Product Attributes**



Of course, these attribute rankings must be interpreted in relative terms. While it is true that today "quality" is judged as more important than "year round availability," for example, buyers were virtually unanimous in their agreement (95 percent) that "year round availability" is more important today than it was ten years ago.

Although the majority of buyers (65 percent ) stated that their shoppers "always" prefer locally grown produce, they admitted to not being as committed to locally grown products as to the major production areas since they believe that locally grown produce is only "sometimes" of equal quality to the produce grown in the major growing areas (Table 4.6). Specific problems associated with locally grown produce stated by buyers were: lack of proper quality control in field and packing operations, inferior shipping cartons and consumer packaging, lack of promotional support, often inadequate volumes and, frequently, seasons too limited to build an optimal retail sales program.

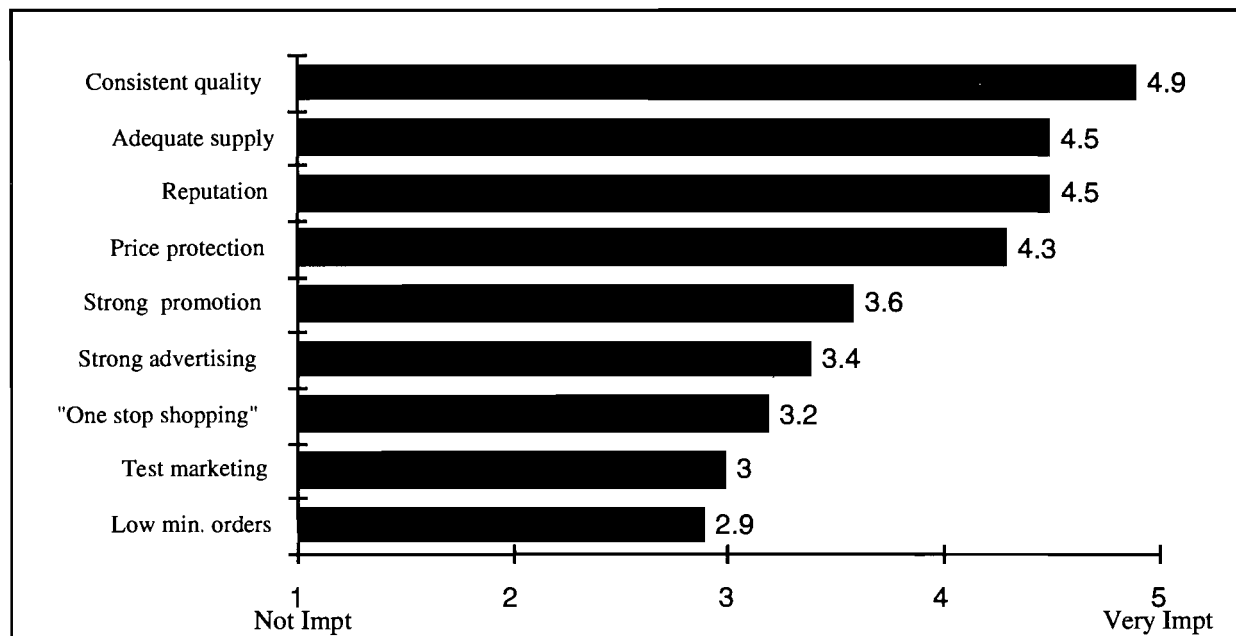
**TABLE 4.6**  
**Buyer Opinion of Shopper Preference for**  
**Locally Grown Produce vs. Quality of Locally Grown**

	Never	Sometimes	Always
	--%--		
Shoppers prefer locally grown	1	34	65
Locally grown equal in quality to major growing areas	7	57	36

### Importance of Supplier Attributes

When asked to rate various supplier attributes by their importance in making purchase decisions, survey respondents indicated the ability to deliver consistent quality was the single most important supplier attribute. This was followed by the ability of the supplier to deliver a large enough supply, the supplier's reputation, and price protection. In contrast, low minimum order quantities, and the ability to provide "one stop shopping" were deemed much less important by produce executives (Figure 4.3 ).

**FIGURE 4.3**  
**Ranking of Supplier Attributes**



### Strategic Implications and Perspectives

- *Supermarket produce buyers have moved away from traditional terminal markets as the primary source of their produce supplies (Table 4.4). Over at least the last two decades, the share of produce that supermarkets purchase directly from production areas, whether the transaction is negotiated by a broker or a shipper's sales agent, has continued to grow. Moreover, as retail firm size increases, this tendency accelerates: only 7 percent of the produce in the larger supermarket companies is procured at a terminal market, whereas smaller chains purchase slightly over one-third of their total produce needs at a terminal market (Table 4.4).*

*Although continuing to serve the supermarket industry as an "inventory buffer" to counter-balance retail order errors and as a source of niche, specialty products needed by retailers only in very small quantities, the terminal market has ceased to be a major source of supply for most supermarket chains. Suppliers must be aware that no longer can they afford themselves the "luxury" of sending less-than-optimal quality products to the market, secure in the knowledge that if the load did not meet buyer approval, it could always be "reworked" or sent elsewhere, as was often conventional practice when the terminal market was the first destination. Supermarkets do not have the space, the personnel nor the patience to rework out-of-condition produce. Given the more rigorous demands of contemporary shoppers regarding produce quality combined with the retailer's inability to re-condition poor condition product and unwillingness to compromise their standards for a lower price, suppliers must be vigilant in the quality of produce they forward to their supermarket accounts.*

- *When ranking the most important product attributes on which they base purchase decisions, buyers voted clearly: "best quality available." Shippers take note: again, the quality imperative is repeated. "Price" only figured about halfway down the*

list of ten leading factors (Figure 4.2). It appears that buyers are asking for the best quality possible and are prepared to pay more--although clearly, marketplace realities put limits on the premium buyers may be willing to pay to obtain the best quality standard. Naturally, for growers and shippers to convert this finding into meaningful strategy, they must probe their retail accounts for the various buyer interpretations of the elusive concept of "quality." Whereas to some it may translate as "appearance and color" or perhaps a "minimum amount of bruising and shrink," to others quality may suggest "convenience, shelf-life or, increasingly, taste."

- For a number of years, produce industry practitioners have been exhorted to apply Direct Product Profit (DPP) techniques to the produce department as their grocery colleagues have done. However, Figure 4.2 suggests that the gross margin tradition remains dominant in produce buyers' decision-making calculus despite the supposed superiority of DPP as a preferred performance measure. Indeed, several prominent shippers stated that they have never even been asked about an item's DPP.

This finding sends two signals to suppliers: first, if despite all evidence to the contrary, buyers insist on clinging to time-honored gross margin measures, then suppliers need to adjust their products and marketing programs in ways to maximize their attractiveness based on the gross margin criterion. Second, at the same time, however, suppliers should still ensure that their products rank high on other arguably more effective performance measures, like DPP, and then strive to create buyer awareness and understanding of the importance of such new measures in the long run. The alert supplier must assist the buyer in applying innovative techniques to measure product and program success in new and appropriate ways.

- In spite of the recent popularity of various new precut and packaged fresh fruits and vegetables, many associated with "branded" products, produce buyers were quite negative regarding the importance of this particular product attribute. This result needs to be interpreted cautiously, however: while, on the one hand, buyers are not apparently favorably impressed with a "brand" in and of itself, they do report being positively influenced by "quality, consistency, high margins, strong demand, competitive pricing, and innovative packaging",--the exact characteristics of a brand! Thus suppliers may be well advised to consider whether they want to position their new products as "consumer" brands with the strong in-store promotional material and electronic media that such a positioning implies, or whether they may be better off instead investing into building a brand franchise with the customer who matters most, the supermarket buyer.

Preference for a brand may also be a function of retail company size. Larger firms may feel that abandoning the image associated with their own "retail" brand of produce is too high a price to pay. A smaller retailer, on the other hand, may be relieved to know that a supplier is ready to take on some level of retail responsibility for the product's care and merchandising. Successful suppliers will keep abreast of the different preferences in various buyer segments.

- Buyers also revealed their preferences regarding supplier choices. Of the leading four attributes most valued by supermarket produce buyers, just one, "adequate supply," is likely to be in the province of the larger supplier only (Figure 4.3). The other top three--"consistent quality, reputation and price protection"--are all attributes that could be equally applied to small and medium sized suppliers as to larger firms. This should be interpreted very positively by grower/shippers who are concerned that

*supermarket companies are only interested in developing and maintaining relationships with the largest suppliers. These data indicate otherwise.*

*Moreover, a decade ago, some in the industry forecast that future industry structure would be dominated by "multicommodity" shippers who would be able to fill very large portions of buyers' total needs in a sort of "one-stop-shopping." Our survey indicates that although there are certain industry forces continuing to move in that direction, buyers do not yet evaluate this particular feature of a supplier very highly. This should be good news for the smaller, single-commodity producer of high quality products. Similarly, smaller, seasonal suppliers should be encouraged that although virtually all buyers agreed that year round availability was more important today than it was ten years ago, they ranked this attribute as far less important than "quality," "appropriateness of season," and "competitive price." Finally, buyers ranked "strong promotion from suppliers ahead of "strong advertising." Since all but the largest of suppliers cannot generally afford frequent media advertising, this again argues for the continued viability of small suppliers.*

*The bottom line is this: produce buyers continue to make decisions based on product quality, consumer demand and logistical support, not on advertisements, extensive product portfolios or consumer brands.*

### *C) New Product Issues*

#### **Acceptance Rate of New Products**

Survey respondents indicated that 43 percent of all new products which are presented to them are accepted into their stores. A "new product" for the purpose of this study was defined as any produce item that requires a new SKU, excluding simply new crops or other items that are normally seasonal. Fully 71 percent of these newly introduced items are fresh products as opposed to "non-fresh" (e.g. bird seed, fireplace logs, etc.), with "value added" products (e.g. precut vegetables) being accepted at twice the rate of new domestic and imported fresh items. These fresh produce findings concur with those in the Fredericks and McLaughlin (1992) grocery study where a total new product acceptance rate for dry grocery items of 44 percent was found. Given the enormously greater number of new grocery introductions each year (over 16,000 in 1992), it is curious that the acceptance percentage is so similar.

Once again, firm size makes a difference. When compared to all responding firms, those firms with annual sales volume greater than \$1.5 billion indicated accepting a greater percentage of new products annually (50%) than did smaller firms. Within the mix of new produce products in large firms, fresh products, particularly new domestic varieties, are being accepted at considerably higher rates than non-fresh products (Table 4.7).

**TABLE 4.7**  
**New Produce Product Acceptance: 1992**  
*Firms with Annual Sales Greater than \$1.5 billion*

<b>New Products</b>	<b>Presented --# items--</b>	<b>% Accepted --%--</b>
<b>FRESH PRODUCTS:</b>		
Domestic new varieties	7.4	70%
"Value Added"	23.3	55
Imported items	6.9	59
<b>NON-FRESH PRODUCTS</b>	22.1	19
<b>TOTAL NEW PRODUCTS</b>	65.8	50%

Smaller firms, those with sales less than \$300 million annually, appear to stress non-fresh products more than their larger counterparts (Table 4.8): in fact, small firms accept new non-fresh items at nearly twice the rate as large firms. When accepting fresh products, these smaller firms emphasized value added produce in their produce mix.

**TABLE 4.8**  
**New Produce Product Acceptance, 1992**  
*Firms with Annual Sales Less than \$300 million*

<b>New Products</b>	<b>Presented</b> -- # items --	<b>Accepted</b> --%--
<b>FRESH PRODUCTS:</b>		
Domestic new varieties	11.6	51%
"Value Added"	14.1	67
Imported items	8.2	57
<b>NON-FRESH PRODUCTS</b>	31.2	36
<b>TOTAL NEW PRODUCTS</b>	63.2	48%

In general, the total number of new items presented to large and small firms is about the same (66 vs. 63). One difference however, appears to be that certain suppliers present their value-added items first to larger retailers (23 vs. 14). But, ironically, this study shows that the acceptance percentage for such new value-added items is actually better with smaller firms.

### **Product Deletion**

Given the relatively fixed dimensions of the produce department, at least in the short run, accepting new products into the department requires that other items be deleted. During the past year, survey respondents reported deleting an average of 14 products from the produce department. Over three-quarters of these products were non-fresh, and the remainder (24 percent) were fresh products. The majority of respondents indicated that the major reason for a product deletion was "slow movement" or "lack of sales". "Duplication with an existing product" and "quality problems" were also each mentioned as reasons for deleting a product.

Thus, with the addition of approximately 27 new products each year, and the deletion of only about 14, the average produce department shows a net increase of approximately 12.5 products annually or, in other words, 89 percent more products are added annually than deleted (Table 4.9).

**TABLE 4.9**  
**Produce Product Acceptance/Deletion Rate by Firm Sales Volume**

	<b>Accepted</b>			<b>Deleted</b>		
	<b>All Firms</b>	<b>Sales &lt; \$300 M</b>	<b>Sales &gt; \$1.5 B</b>	<b>All Firms</b>	<b>Sales &lt; \$300 M</b>	<b>Sales &gt; \$1.5 B</b>
Fresh	19.3	20.0	22.0	3.3	3.0	4.5
Non-Fresh	7.2	11.2	4.1	10.7	13.8	5.9
<b>TOTAL</b>	<b>26.5</b>	<b>31.2</b>	<b>26.1</b>	<b>14.0</b>	<b>16.8</b>	<b>10.4</b>

In contrast to the produce department, the Fredericks/McLaughlin study on supermarket grocery buyers revealed that 1,325 new products were accepted annually, while 1,130 were deleted for the same period. That is, in the grocery category, a typical

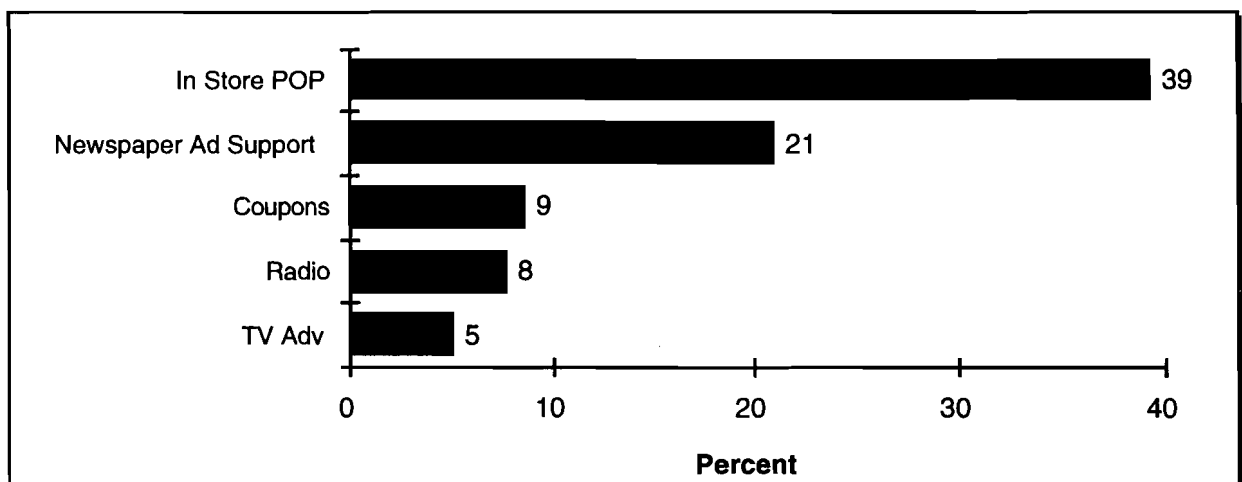
company experienced a net product addition of only 17 percent, considerably less than what produce executives report. Extrapolating this trend would lead to a net growth rate in new produce items about four times greater than the comparable figure in the grocery department. Larger firms displayed an even more dramatic net addition of new products annually, accepting on average 150 percent more products than they deleted, with the majority of these new products being "fresh", particularly new domestic varieties (Table 4.9). The smaller firms in the study indicated adding 102 percent more products than they deleted in the past year; however a greater proportion of these were non-fresh and "value added" products.

A final significant trend should be noted from Table 4.9: all firm sizes indicated a greater number of non-fresh product deletions than additions, resulting in an absolute reduction in the number of non-fresh products in the produce department. This development, if it persists, may lead to an important shift in the relative stability of the historical fresh/non-fresh mix of the produce department (see also next section).

### Supplier Support

When questioned about which advertising and promotional support was most often offered from suppliers, buyers reported that in-store point-of-purchase (POP) information was by far the most frequently available, offered by about 40 percent of all suppliers (Figure 4.4). However, slightly over 20 percent of suppliers also provide newspaper ad support to their retail buyers.

**FIGURE 4.4**  
**Types of Supplier Support**  
**--percent of suppliers offering--**

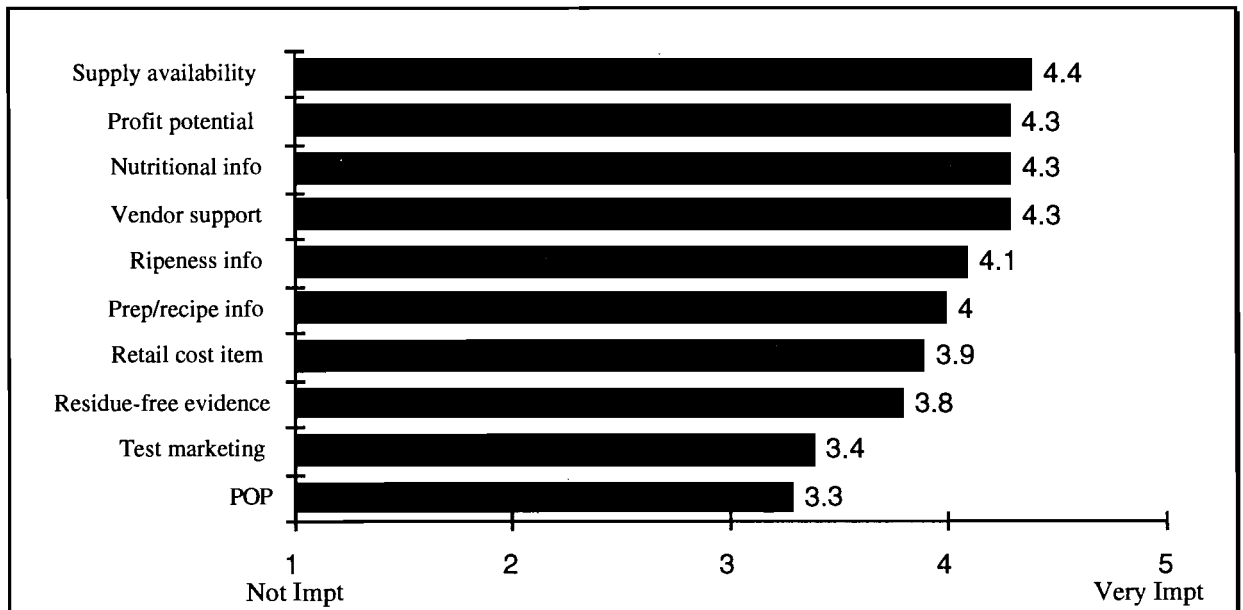


### New Product Information Desired

When produce buyers were asked about the criteria they employ in deciding whether to accept a new item, "supply availability" ranked more important than all other factors (Figure 4.5). However, they also indicated potential profitability, nutritional information and vendor promotional support as important information that influenced their decision.

However, among ten major factors, survey respondents ranked six attributes as more important than "price" when considering a new item, dispelling again a conventional notion--widely held in the produce shipping industry--that price alone determines buyer acceptance. Further, despite calls in some sectors for vendor promotional support, produce executives indicated that POP displays were of least importance to them when deciding on the acceptance of a new item.

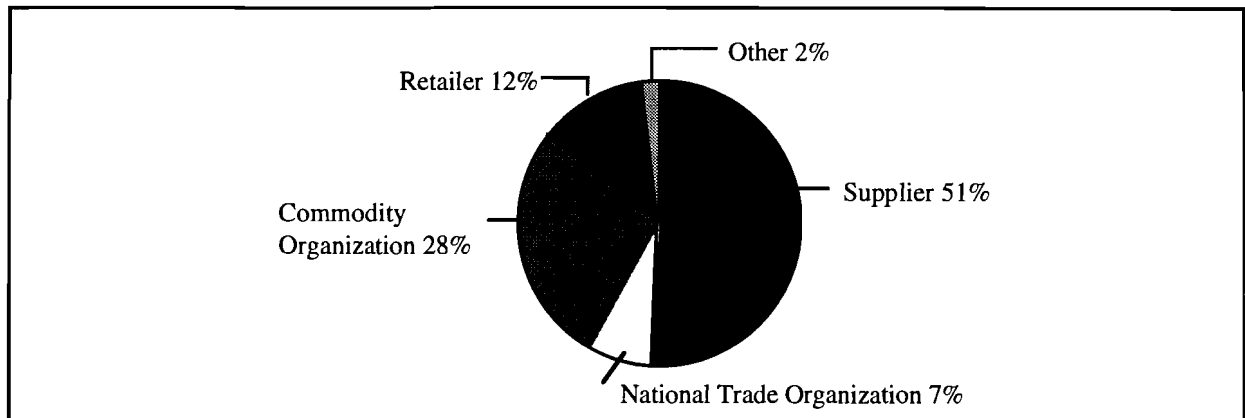
**FIGURE 4.5**  
**Importance of New Product Information**



### Source of New Product Marketing Information

When a new item is being introduced into the produce department, just over half of produce executives believe it is the supplier who should have the primary responsibility for providing accompanying marketing and promotion information. Slightly over one-quarter, however, believes this is the responsibility of the commodity organization (Figure 4.6).

**FIGURE 4.6**  
**Buyers' View on Marketing/Promotion Information for New Products**  
 --"primary responsibility should be with ... "--



### Strategic Implications and Perspectives

- Although produce buyers do not contend with the deluge of new products faced by their grocery buyer counterparts, they are presented about 65 new products each year with an average acceptance rate of approximately 50 percent. But once again large retailers have had a different experience than smaller retailers: compared to smaller retailers, they have had nearly twice as many "value added" products presented to them but only two-thirds as many non-fresh products. Moreover, judging by acceptance rate differences, larger companies appear to be slightly more favorable to new domestic products, while the smaller companies seem to favor value-added and imported items. It is possible that larger companies are presented more new value-added items due to their greater perceived ability to handle the challenging temperature control and equipment requirements of this sensitive new category.

- Non-fresh produce items accounted for the greatest numbers of new product introductions of any category in 1992, yet the lowest acceptance rates by buyers (Tables 4.7 and 4.8 and the highest deletion rates (Table 4.9). In fact, more products in the non-fresh category were deleted than added across all firms, leaving a net reduction in the number of non-fresh items of approximately 3.5 items per firm. If this annual rate is projected for the next 7 years, to the year 2000, the result would be a dramatic shift in the balance of fresh versus non-fresh items in the average produce department: by the year 2000, only about 5 percent (25 items) in the department would be non-fresh or less than half of today's share (Table 4.10). One implication of such a forecast is that the produce departments in the future are likely to be more receptive to new items from "fresh" suppliers but, conversely, less receptive to products from non-fresh sources.

**TABLE 4.10**  
**Balance of Fresh and Non-Fresh Produce Products**  
**in the Supermarket Produce Department: 1990 and 2000**

Number of Items	1990 <sup>1</sup>	Net Change	2000 <sup>2</sup>
Fresh	310	+160	470
Non-Fresh	60	-35	25
<b>TOTAL</b>	<b>370</b>	<b>+125</b>	<b>495</b>

<sup>1</sup>Current

<sup>2</sup>Projected

- Although buyers report that the most frequently available type of promotional support from suppliers is Point of Purchase (POP) material (Figure 4.4), they rate its importance as extremely low when evaluating new products (Figure 4.5). Several produce buyers from larger companies stated that they spend millions of dollars for designers and architects to create the proper in-store environment and, resultingly, are generally unwilling to alter that environment with what one described as "merchandising clutter." Other retailers do not take this position, however, and actively encourage POP information. The supplier message: know the attitude of the customer vis-a-vis POP material, but given the unfavorable rating the majority of buyers gave to POP material in this survey, consider investing scarce marketing funds in areas that make a positive, not a negative, impression on buyers.

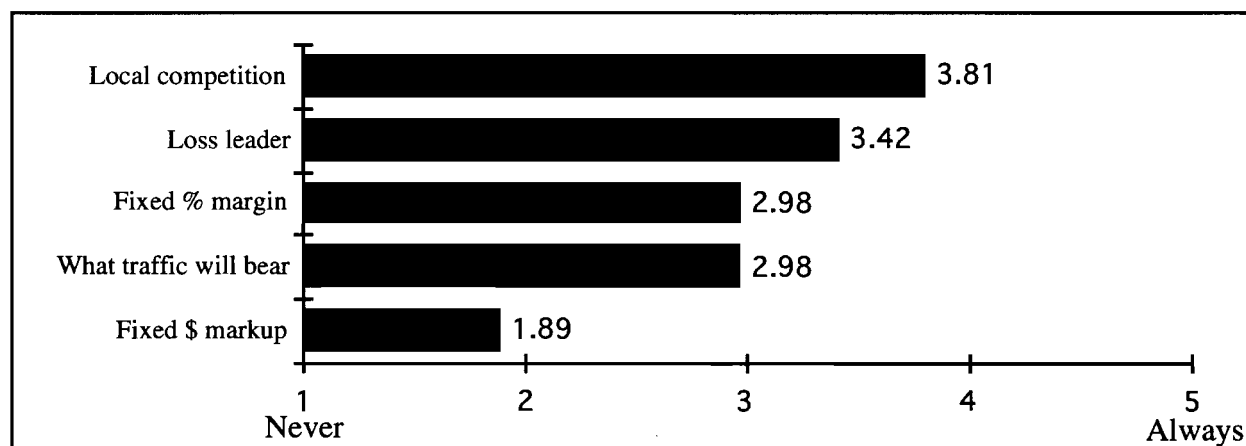
## D) Management Of The Produce Department: Pricing and Performance

### Produce Pricing and Performance Measures

When asked to rank the most frequently employed methods currently used to establish retail produce prices, respondents indicated that "local competitive conditions," more than any other factor, shape their decisions (Figure 4.7). However, depending on the importance of the item in the ad program, nearly all the other techniques listed are employed as well. For example, several produce buyers mentioned that they rarely use a "fixed dollar markup" technique whereby a certain amount, say \$.50, is added to the cost of the product to set the retail price. However, for certain high price items--say, an exotic flowering plant in a large pot-- even this technique is employed occasionally.

Many produce buyers point out that often all of the methods listed in Figure 4.7 are used in combination; however, no one method prevails for all products on a "week-in, week-out" basis: for example, many items may be priced to be "competitive" with expected competitors' prices, some may be marked-up using a standard department "going-in gross" margin average and some front page feature items might be sold on a "loss leader" basis. Incidentally, such "loss leaders" are calculated by buyers not to be an absolute loss below the actual FOB price paid, but rather simply to be margins lower than "normal."

**FIGURE 4.7**  
Use of Various Price Setting Techniques

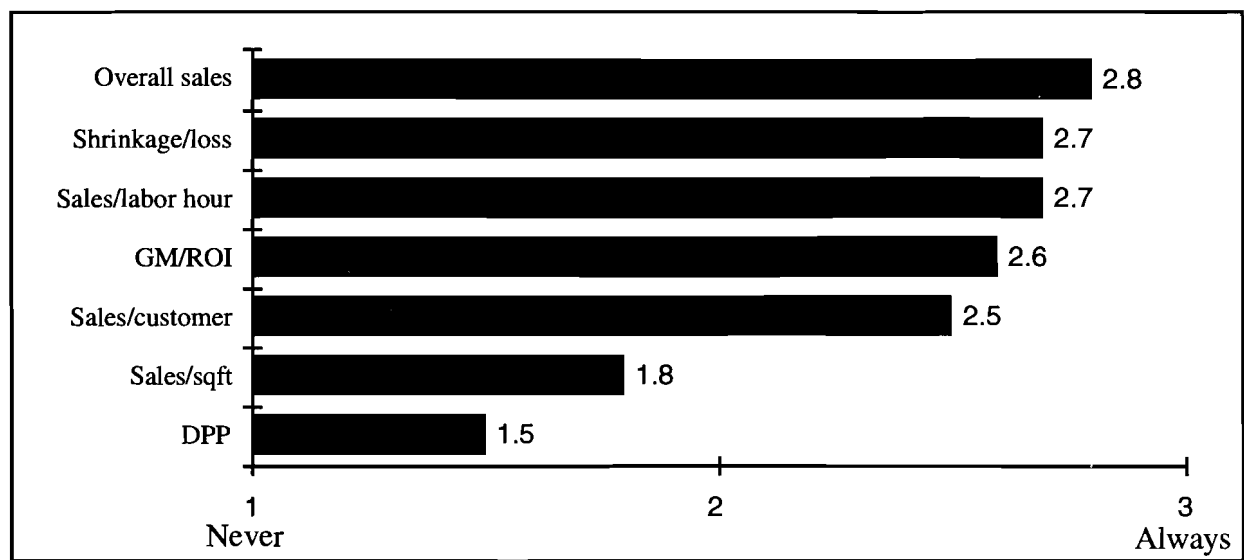


Although certainly not yet a dominant produce pricing method between grower/shipper and retailer, several variations of contract pricing--*any agreement whereby multiple orders are placed over time, e.g. an entire season or year, at a pre-determined price(s) or a price not subject to all the usual market vagaries*---were also mentioned by many produce buyers. Roughly one-third of all firms use contract pricing with grower/shippers at least on a limited basis for certain commodities or for certain periods of the year. Ten percent of all companies, for example, frequently ("often or always") use contract pricing by month for leaf lettuce, bananas, grapes and apples. About the same number of firms reported engaging in contract pricing quarterly for bananas, lettuce, and several other items. Finally, a slightly larger group said that they

negotiate annual contract prices for certain items like dried fruit, bananas, pineapple, lettuce, potatoes and other non-fresh items.

As produce buyers evaluate their own products and department performance, the single most important criterion they employ is overall sales revenues (Figure 4.8). Also ranked very highly and almost always used, however, were various measures of shrinkage/loss, sales per labor hour, Gross Margin ROI and sales per customer. Despite much industry urging several years ago, Direct Product Profit (DPP) has apparently not been found to be a very useful performance measure by most supermarket produce buyers as they indicated that they rarely or never use it.

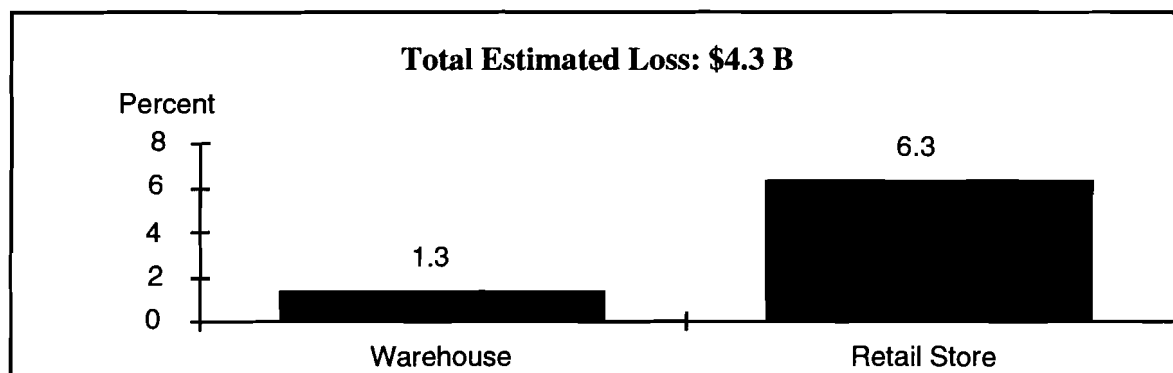
**FIGURE 4.8**  
**Use of Various Performance Measures**



### Produce Losses

When asked to indicate the total produce shrinkage or loss (explained and unexplained) factor as a percentage of produce sales, the participants in our survey indicated a total shrinkage of 7.6 percent of sales. When disaggregated, this reveals a shrink factor of 1.3 percent at the warehouse and 6.3 percent at the store level (Figure 4.9). If retail produce sales in the early 1990's are estimated to be approximately \$56 billion (Table 1.4), then applying this loss factor to total sales points up a total product loss of approximately \$4.26 billion in retail value. Moreover, this is likely to be quite a conservative estimate given the higher shrink level generally acknowledged by the independent supermarkets. Although the dollar figure differs, this percentage loss (shrink) estimate is very consistent with the NSF-RANN study in the 1970's that estimated wholesale-retail produce losses to be in the range of 5.2-11.6 percent of retail sales, the highest of any major food category in the store (Allen, Pierson & McLaughlin 1982).

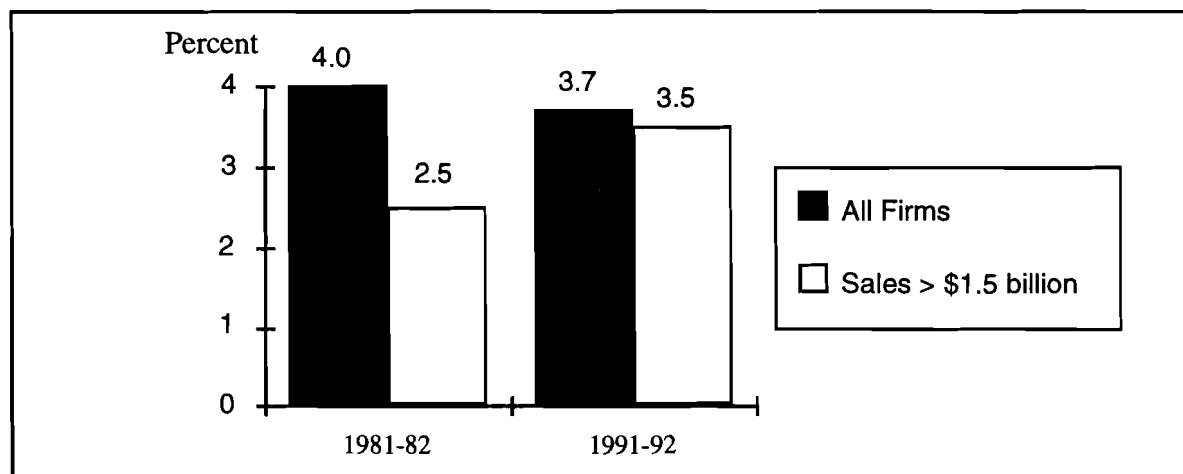
**FIGURE 4.9**  
**Retail and Wholesale Produce Shrink**  
**--percent of total produce sales--**



### Produce Rejections

Although the percentage of total loads arriving at wholesale/retail warehouses that are rejected has gone down slightly for the average supermarket chain (from 4.0 percent of total arrivals in 1981-82 to 3.7 percent in 1991-92), that percentage has increased substantially for the largest firm sizes (Figure 4.10) from 2.5 percent of total arrivals in the earlier period to 3.5 percent in the most recent era.

**FIGURE 4.10**  
**Produce Rejections: 1981-82 and 1991-92**  
**--percent of total arrivals--**



### Planning Processes

When asked to specify the lead times required to establish retail pricing and promotional levels, buyers responses varied. Over 90 percent of respondents reported that only a week or less was necessary for establishing normal retail prices (Table 4.11). However, planning ads is an activity which usually takes considerably longer, with

normal weekly ads taking somewhat less time to plan than front page "loss leader" or feature ads . In both of these cases, nearly one-third of all buyers reported that under normal circumstances they needed a minimum of one month to plan for an advertised item .

**TABLE 4.11**  
**Planning Horizon for Various Activities**  
 -- percent of all respondents --

<b>Planning Horizon</b>	<b>Price Setting</b>	<b>Front Page "Loss Leader"</b>	<b>Normal Weekly Ad</b>	<b>Introduce New Item</b>
1 week or less	90	32	42	50
2-4 weeks	3	41	29	31
2 months/more	0	11	15	15
Other	7	16	14	4
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Of particular interest is the fact that over 80 percent of all buyers reported being able to add a "new" item with less than a month's planning, with one-half saying that this could be accomplished in a week's time.

### Response to Sales Promotions

Buyers were asked to indicate their normal expectations regarding the power of various combinations of pricing and merchandising techniques on department sales. The results of their estimation are compared with a similar question asked of a national sample of grocery buyers regarding the grocery category in Table 4.12. Generally speaking, grocery buyers felt that promotional techniques were likely to boost sales substantially more for dry goods than their counter parts in perishables. Produce buyers, for example, reported that running a major ad at a "regular" price level would increase sales approximately 12 percent higher than a non-ad condition, while grocery buyers felt that a major ad alone might contribute 38 percent more sales.

**TABLE 4.12**  
**Buyer Perceptions of Sale Impacts of Selected**  
**Price/Promotion Combinations for Produce and Dry Grocery Items**  
 -- Index numbers--

<b>Promotion Activity</b>	<b>Regular Price</b>		<b>25 % Price Reduction</b>	
	<b>Produce</b>	<b>Dry Grocery<sup>1</sup></b>	<b>Produce</b>	<b>Dry Grocery<sup>1</sup></b>
No Promotion	100	100	123	150
Minor ad	104	114	137	225
Greater shelf space	110	108	145	161
Retail coupon	105	122	120	260
In-store demo	117	153	152	273
Major ad	112	138	165	418
<b>AVERAGE</b>	<b>108</b>	<b>123</b>	<b>140</b>	<b>318</b>

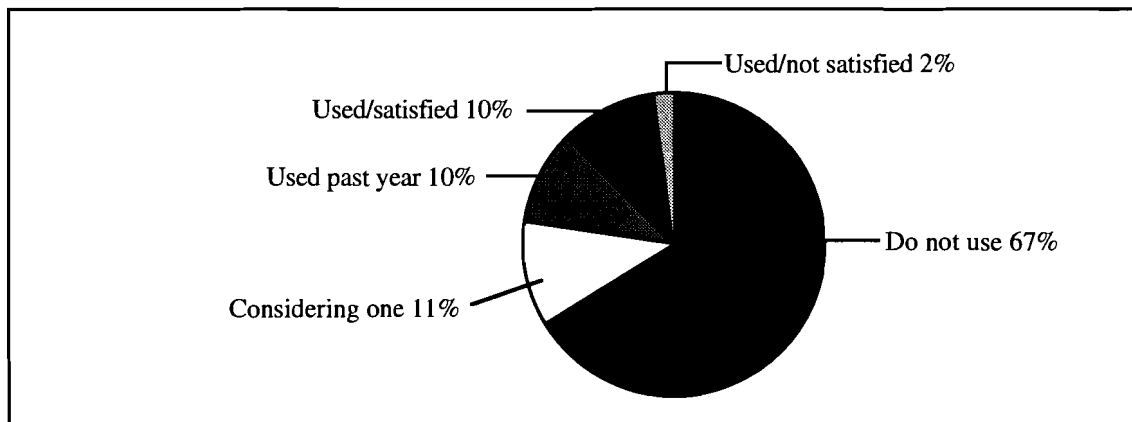
<sup>1</sup> Source: Russo and McLaughlin 1992

Once price reductions are taken into account, however, the differences become more dramatic. Applying a 25 percent retail price reduction to a standard item in the grocery or produce departments produces more than a threefold sales increase in groceries according to grocery buyers but only a 65 percent increase in produce sales according to our produce respondents. Interestingly, at regular price levels, produce buyers indicate that simply adding more shelf space generates almost as great an increase in sales (10%) as a major ad (12%).

### Use of Category Management

Although new methods of product procurement and merchandising often described as "total category management", are rapidly being adopted by grocery buyers (Fredericks and McLaughlin 1992), two thirds of produce executives reported they are not using any type of category management system currently (Figure 4.11). Surprisingly, however, already fully one-third of survey respondents indicated either some recent use or expected use of these new category management techniques in the produce department.

**FIGURE 4.11**  
**Current Use of Category Management**  
 --percent of total respondents--



### Strategic Implications and Perspectives

• *To the perennial grower/shipper question, "Why are large swings in FOB prices not reflected in retail price levels?" Figure 4.7 holds part of the explanation: grower/shipper prices play only a partial role in the techniques that buyers say they use to set their retail prices. Local market conditions and attracting customers through loss leader pricing are the two most prevalent pricing techniques employed by produce buyers yet neither one of them is directly tied to FOB prices. If local market conditions are the single most important criterion to buyers as they establish weekly retail prices, shippers interested in gaining maximum negotiation leverage would do well to arm themselves with such local market information.*

• Most produce buyers were quick to point out that although certain pricing techniques were more important than others, in general, nearly all were used in combination to produce the important "sales program and ad mix." This working document establishes the parameters that guide produce buyers in selecting their weekly ad items as well as the pricing and margin structure. A typical produce buyer might follow the SOPs indicated in the three steps below in creating the weekly prototype Produce Sales and Ad Program: The reader should use Exhibit 4.2 as a reference for this discussion.

1) Price the "non-ad" items (Note: pricing of individual non-ad items not shown in Exhibit 4.2)

- objective: a 50% to 55% "going-in" (before shrink) gross margin for non-ad items (48% in Exh. 4.2B).
- start with FOB cost--Example: \$8.00 per box of prunes. Prunes, an arbitrary selection, would be one component of the many non-ad commodities and would thus contribute to overall department sales in the GM% on non-ad items (Exh. 4.2 (B)).
- divide by weight of box to achieve per pound price ( $\$8.00 \div 30 \text{ lb.} = \$.26/\text{lb.}$ ).
- multiply by 2 to achieve the approximate 50% gross margin, or \$.53 per pound.
- adjust for expected shrink by "rounding up".
- using the common retail "pricing-on -the-nines" rule, this yields a retail price of \$.59/lb. (a gross margin of 59.9%)
- modify this price for local competition in different price zones.

2) Price "ad" items

- objective: a 20% to 30% "going-in" gross (before shrink) margin for ad items (25.16% in Exh. 4.2B).
- select items with a seasonal or "promotable" potential.
- follow steps in (1)
- many produce buyers attempt to ensure that the ratio of sales of produce ad items to non-ad items stays between 25% to 40% (see Exh. 4.2)

3) Adjust the mix and prices of ad and non-ad items until the department gross margin target is achieved (although the target in Exh. 4.2 was 36%, the mix of products this particular week produced a 37.45% department margin).

- if the overall department margin is below target, this may be acceptable if it helps to draw more customers to the whole store, since other departments may have more attractive (higher) gross margins during a particular week. Retail senior management has two levels of goals for produce, the first subservient to the second:
  - \* to optimize department net contribution to store operations
  - \* to maximize store profit, not produce department profit.
- if the overall department margin is above target, the buyer may drop a few items or, often, go to a supplier for a "price break" that will in turn "allow" the retailer to offer a lower retail price.
- the buyer may "fine-tune the estimate of volume movement that should be produced by a given price level (column J in Exh. 4.2) by: (a) examining movement during the most recent sale of the same item at comparable price levels, (b) examining movement during the same promotion at the same time the previous year, (c) surveying store-level produce managers for their projections and, finally, (d) exercising managerial judgment.

**Exhibit 4.2(A) Buyer's Weekly Produce Sales & Ad Program: Prototype Worksheet**

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Ad Item Description	Size	Pack	Case Cost	Unit Cost	Unit Retail	Case Retail	Case Margin Percent	Case Margin Dollars	Est. Sales (cases)	Total Retail	Total Cost	Total Margin Dollars
Green squash	20lb.	20	5.00	0.250	0.49	9.80	48.98	4.80	1,000	9,800	5,000	4,800
Squash yellow	20lb.	20	5.00	0.250	0.49	9.80	48.98	4.80	500	4,900	2,500	2,400
Potato red	5lb.	10	10.15	1.015	1.79	17.90	43.30	7.75	650	11,635	6,597	5,038
Potato Russet	5lb.	10	9.65	0.965	1.79	17.90	46.09	8.25	1,200	21,480	11,580	9,900
Caesar Salad Fresh	10oz.	12	14.40	1.200	1.79	21.48	32.96	7.08	250	5,370	3,600	1,770
Garden Salad Fresh	16oz.	12	10.65	U	1.29	15.48	100.00	4.83	400	6,192	4,260	1,932
Green Beans	26lb.	26	11.90	0.458	0.58	15.08	21.09	3.18	500	7,540	5,950	1,590
Apple Empire	3lb.	12	9.90	0.825	1.49	17.88	44.63	7.98	800	14,304	7,920	6,384
Cherries	20lb.	20	18.35	0.918	0.89	17.80	-3.09	-0.55	4,500	80,100	82,575	-2,475
Peaches Southern	38lb.	38	15.35	0.404	0.59	22.42	31.53	7.07	2,500	56,050	38,375	17,675
Nectarine	25lb.	25	13.10	0.524	0.89	22.25	41.12	9.15	800	17,800	10,480	7,320
Oranges Cal Val	72	72	14.60	0.203	0.33	23.76	38.55	9.16	750	17,820	10,950	6,870
Pineapple	10	10	11.65	1.165	1.49	14.90	21.81	3.25	750	11,175	8,737	2,438
Mango	10	10	6.15	0.615	0.99	9.90	37.88	3.75	650	6,435	3,997	2,438
<b>Totals</b>										<b>\$270,601</b>	<b>\$202,522</b>	<b>\$68,080</b>

**(B) Store/Department Summary Projections**

Total Chain Sales	\$13,900,000
Produce Distribution Percent	8.8%
Produce Sales	\$1,223,000
Target Gross Margin	36%
Gross Profit Dollars	\$440,352
G.M.% on Non Ad Items	48%
G.M.% on Ad Items	25.16%
Sales \$ of Non Ad Items	\$952,599
Projected Gross Profit \$ on Non Ad Items	\$457,247
Total Projected Gross Profit Dollars	\$525,326
Projected Gross Margin % Before Shrink	42.95%
Projected Produce Shrink %	5.5%
Projected Gross Margin %	37.45%

- *Grower/shippers are frequently heard to lament that retailers are not willing to lower their retail prices in order to move more volume through the "pipeline." To this sentiment, there are a number of responses offered by retail produce buyers:*

- *A lower retail price may not result in additional retail sales if the reduced price is either (a) lowered by so little that consumers do not recognize the reduction or (b) low enough that the reduction is recognized by shoppers but not so low as to induce additional sales. That is, low enough to be recognized but not low enough to stimulate response. In either case, quantity movement changes very little if at all but total retail sales revenue plummets due to the reduced price. Retailers clearly have little interest in such an option.*
- *If, like many staple food commodities, the produce item is characterized by a relatively inelastic retail demand (e.g., very limited sales response despite large price changes) then, once again, the retailer has nothing to gain and everything to lose if he lowers retail price. And the more he lowers it, in a (futile) effort to stimulate greater volume movement, the more he loses, as the modest quantity increases cannot keep pace with the price declines. Naturally, this scenario would lead to a free-fall in total retail sales revenues.*
- *If, on the other hand, the retailer faces an elastic demand for a particular set of price sensitive produce items, it is theoretically possible for him to increase volume movement and total sales revenue by lowering price within a limited range. However, even here, additional revenue generating possibilities are constrained by real-world caveats. First, many retailers feel that they have already discovered the "optimal price threshold" beyond which further price declines will not produce relatively greater volume increases.*

*Further, most produce buyers understand that any retail price is only "low" relative to the competitor's price. Since, as our results demonstrate, competitors' prices are the single biggest factor in price setting, it is probable that competitor retaliation would be rapid and nearly certain. Thus any advantage gained by lowering a given retail price would be very short-lived. Finally, unlike packaged goods, increasing produce movement, whether by price reductions or other means, is always constrained by the product's inherent perishability that prevents stockpiling in the home (see Table 4.11).*

- *A strongly held retail perception is that consumers prefer stable prices when shopping. This then, is used by some buyers as an explanation of why retailers are often reluctant to change, especially to reduce, prices. The evidence in this survey regarding the growing prevalence of contract-type pricing lends some credence to the retailer view that they are indeed interested in stable prices over a period of time longer than a few days or weeks. Of course, to the extent that such an agreed-on price between a buyer and a seller facilitates planning, planting, harvesting and shipping activities for growers and shippers, the entire produce system including consumers, benefits.*

- *The prices for individual produce items are established in concert with one another to achieve the balance needed for the desired department financial objectives as outlined in Exhibit 4.2. The reduction of the price (and margin) of one item, say, green peppers, may result in the increase of the price of another item, perhaps red peppers, in order to attain the department sales and profit goals. To the extent that this behavior is followed by retailers, suppliers may be successful in moving more of one commodity only at the expense of another. Of course, in some cases such a result could be desirable.*
- *Produce prices are established in concert with those of all other departments in the store by senior management. The resulting constellation of prices is an attempt to achieve one coherent image in the minds of a target consumer segment(s) for a given market area. The complexity of such marketplace positioning for a retail firm with perhaps 35,000 different products is, as any retailer will admit, part science and part art. Selecting the optimal mix of retail products to offer from the hundreds of thousands available and then choosing the exact price levels for each in order to produce overall bottom line success is perhaps the biggest single retail challenge, and enigma.*
- *Finally, it should be recalled from Section I, that over three-quarters of the marketing bill for fresh fruits and vegetables covers marketing-related activities that occur beyond the farm gate. The farm contribution is slightly less than a quarter of the total. Thus, it should not be surprising that even relatively large swings in the prices of a small component of the total consumer value are not always reflected in price changes of equal magnitude at the retail level.*

• *A wide variety of produce department indicators are used by buyers to evaluate performance (Figure 4.8) but the leading criterion is the time-honored measure of "overall sales." This one factor has continued to be the most meaningful performance measure of shop-keepers for millennia due to its ease of use coupled with its overriding importance: when net profit is only about 1 percent of sales--the lowest in any major industry--retailers recognize the critical nature of sales volumes and turnover as the keys to profitability.*

*Important implications for shippers can be derived, however, from examining the ways in which they can assist the retailers in improving the measures of performance that retailers rate highly. "Shrinkage and sales per labor hour," for example, are both critical measures where astute suppliers may be able to help. That the relative percentage of wholesale/retail shrink does not appear to have improved in nearly 20 years, for example, suggests that both firm-level and system wide remedies are called for.*

*Often the product losses that do not appear until the retail level are actually incurred further back in the distribution system in packing, handling or harvesting operations. Opportunities exist for shippers to help reduce such losses. Proper shipper maintenance of cooling systems during packing and transportation can reduce subsequent retailer and total system wide costs. Similarly, supplier-initiated "value-added" activities at the shipping level, such as trimming and packaging programs, and even at the wholesale/retail level, such as appropriate secondary cartons, standardized pallets and merchandising support, can result in a remarkable difference in how a retail buyer evaluates his own performance, and, by extension, the supplier's performance. In*

*every instance possible, shippers should be vigilant in seeking out such opportunities to improve their customers' operations.*

- *Despite encouragement from numerous sources, including most of their own industry associations, produce buyers show little actual use of Direct Product Profit (DPP) as a meaningful measure of performance (Figure 4.8). In fact, over 50 percent of our survey respondents report never using it. Produce buyers reported several reasons for this:*

- *The great seasonal variation in the mix of products in the produce department makes application of an "industry standard" much more difficult than in dry grocery.*
- *Fluctuating supply patterns and varying shrink rates affect costs--and thus the development of accurate Direct Product Costs--and retail prices of produce much more than other departments in the store.*
- *Merchandising and handling methods vary more in produce than in the rest of the store, not only between companies but sometimes even within the same firm.*
- *Because of all of the above, the wholesale/retail labor requirements to develop and maintain accurate data to be able to apply DPP procedures in any meaningful way is simply unrealistic and prohibitive for the vast majority of retailers.*

- *The popularly accepted wisdom in the produce industry is that over the last ten years industry wide quality has markedly improved. Departing from this premise, one would expect the finding demonstrated in Figure 4.10: for the average retail firm, the percentage of all produce arrivals at wholesale/retail warehouses that are rejected has decreased since a decade ago. Perplexing, however, is the result that the opposite result obtained for the larger chains. Specifically, the share of their total arrivals that were rejected increased by 40 percent compared to a decade ago. When asked to explain this seemingly perverse result, several industry members offered the following interpretations:*

- *Smaller firms are not as well staffed with quality control personnel, thus are not as able to conduct thorough inspections as their larger counterparts. Essentially, more otherwise unacceptable product "slips through."*
- *Smaller firms are simply not as demanding of quality standards due to the less exacting nature of their shoppers.*
- *Even when a quality problem is discovered, smaller firms are more inclined to simply suggest to the supplier that a "price adjustment" be made. Larger firms, several suggested, are likely not to compromise quality standards, at any price.*
- *Smaller firms do not possess as much "market power" vis-a-vis suppliers and thus have fewer options regarding (a) renegotiating with the initial supplier and (b) fulfilling the product need from another source on very short notice.*

- *Produce buyers routinely complain about suppliers' inability to plan far enough ahead. With the exception of routine price-setting, the majority of buyers report requiring at least two weeks and perhaps as much as several months in order to adequately plan their weekly ads (Table 4.11). This is especially true with major feature (front page, loss-leader) promotions. Buyers are made to feel pressure from their counterparts in other departments who routinely are able to plan major store-wide themes months in advance; typically, the rest of merchandising management in a supermarket company waits for the produce director before being able to finalize major ad programs. Indeed, one produce director groused that, despite this frequently heard complaint from supermarket produce buyers, well over one-half of all produce suppliers are not able to offer a firm price on a major ad one month in advance. Obviously, suppliers able to provide pricing stability for longer periods of time than the conventional norm will impress and win new retail accounts.*

- *The significant fresh produce volume increases that can result from various retail merchandising activities need to be better understood by grower/shippers. Produce sales increases, it was noted, are not of the magnitude of those in grocery, due principally to the highly perishable nature of the product which largely prevents in-home "stock-piling." However, the smaller relative produce sales increases may actually contribute more to overall store operations than the larger magnitude grocery increases for at least two reasons: first, this same inability to "pantry-load" fresh produce as is done with packaged goods also gives produce a distinct promotional advantage over grocery in that produce rarely experiences the "sales decay" typical of grocery products in the weeks following the promotion. Thus the grocery sales "spikes" are less impressive when the subsequent sales declines are subtracted from total gains. Second, although grocery sales might increase by a greater magnitude during a promotion, grocery gross margins are so much lower than those typical of produce--by one-third to one-half--that the gross profit dollars may not be any greater and perhaps less.*

*Of particular note in Table 4.12, for example, is the relatively large volume increases that can be motivated by certain non-price merchandising approaches. Produce suppliers need greater levels of experimentation with key retailers to identify new and more effective ways to market and sell fresh produce. The testing of new merchandising mixes, creative space allocations schemes and innovation in variety management is an overdue opportunity for many shippers.*

- *Although our research shows that two-thirds of all produce buyers do not currently use "category management" methods of managing the produce departments, suppliers should take note of the large changes that appear likely just over the horizon. That category management systems of procurement and merchandising are virtually sweeping the nation's supermarket grocery departments suggests that produce will not lag far behind. Already, one-third of produce buyers claim they have used or are considering using such systems in the near future.*

*Category management systems will accord "bottom-line" profit responsibility to produce buyers for entire categories of fresh produce: attaining budgeted sales, gross margin, net dollars and market share. In order to make such systems successful, buyers will have to enter into new and more committed partnerships with key suppliers. Information must be exchanged more freely, mutual benefits must be self evident and both supplier and retailer must be committed to learning, responding, reacting and continually improving. Such alliances would represent a "sea-change" in many of the adversarial buyer-seller relationships that currently exist in the produce industry.*

*However, at the same time, these new developments and projected directions represent exciting opportunities for produce suppliers to forge new relationships with their key accounts. Leading retailers are already underway with the initial stages. The advent of such new relationships afford suppliers an unique chance to develop bold new initiatives: long-term deals, contract pricing, flexible marketing funds, "continuous replenishment," electronic data exchange capabilities (e.g. purchase orders, pricing and promotional information, invoicing), inventory management, direct-to-store shipment opportunities, shared demand-forecasting and others. Adding value to basic commodities through service, information, and efficiencies will mark the successful produce suppliers of the future.*

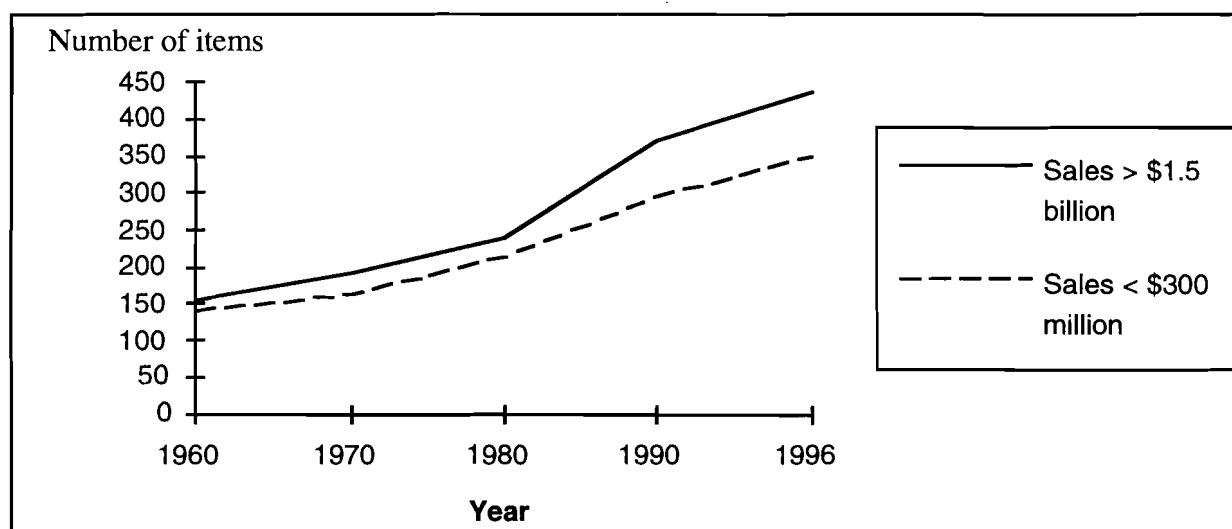
### *E) Produce Department of the Future: Buyer Projections*

#### **Growth in the Produce Department**

The produce department has grown dramatically during the past three decades. In 1990, for example, the average supermarket chain carried approximately 300 items. However, stores from larger firms carried more items than stores from smaller firms (extrapolating backward and forward from 1991 sales volume). In 1990, for example, large chains on average carried 370 stock-keeping units (SKUs) in produce as opposed to only 295 for the smaller firms. Firms with annual sales of less than \$300 million demonstrated an item growth rate of 108 percent during the period from 1960 to 1990. While for the same period, larger firms (annual sales greater than \$1.5 billion), showed an item growth rate still more impressive, 137 percent. These larger firms anticipate the same growth rate for the period from 1990 to 1996 as their smaller counterparts, that is, 18 percent (Figure 4.12).

**FIGURE 4.12**

**Item Growth in the Produce Department by Firm Size<sup>1</sup>: 1960 - 1996<sup>2</sup>**

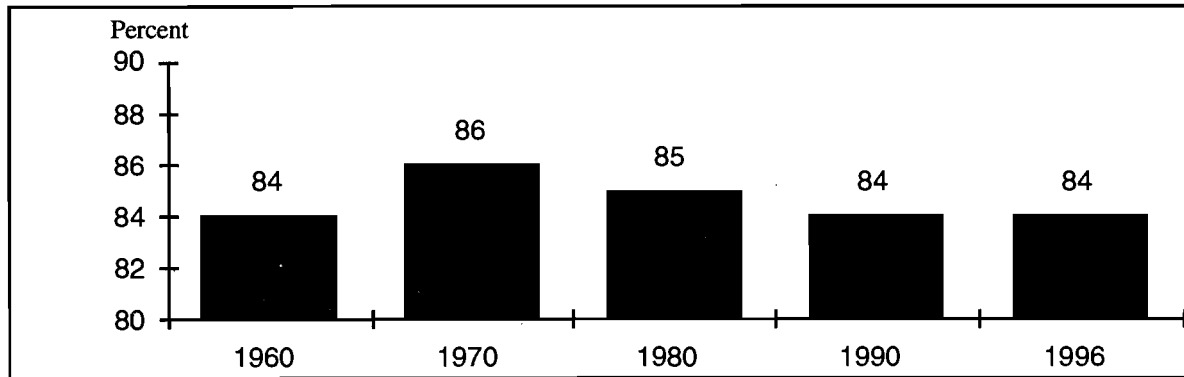


<sup>1</sup> Firm size in 1991.

<sup>2</sup> Projected

Despite this considerable growth in variety, the percentage that fresh items constitute of the total produce department has been remarkably similar for nearly thirty years, peaking only slightly in 1970 (Figure 4.13).

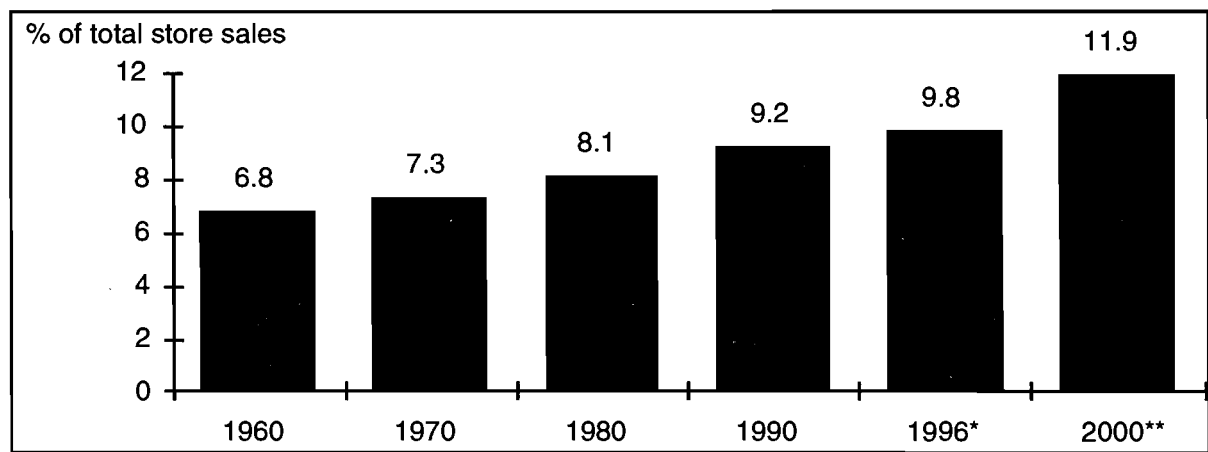
**FIGURE 4.13**  
**Fresh Item Growth: 1960 - 1996<sup>1</sup>**  
 --percent--



<sup>1</sup>Projected

The share of total supermarket sales accounted for by fresh produce--"distribution" in trade parlance--had grown by over 35 percent between 1960 and 1990, according to the produce executives in our sample. Moreover, they forecast further growth over the next few years projecting produce distribution to be nearly 10 percent by 1996 (Figure 4.14) (Note that *Supermarket Business* data (Table 1.7) for 1992 already indicates produce share to be 10.2 percent reflecting apparently their different sample). This bullish outlook from produce executives is corroborated by a similar projection made by another group of senior food industry executives in a research study a year earlier. In that study, the senior food industry managers estimated that by the year 2000 produce sales would constitute 11.9 percent of overall store sales (Russo and McLaughlin 1992). Such growth projections outstrip all other major categories of the food store, with the exception of the deli (bakery) department.

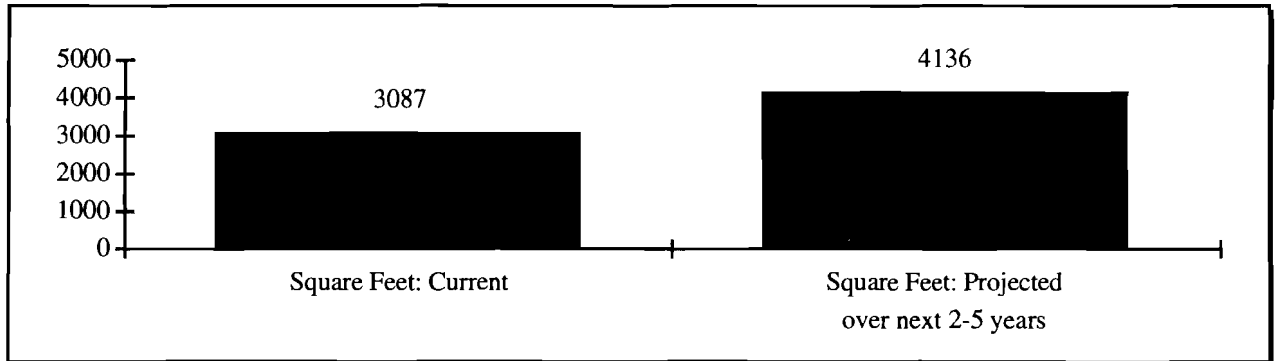
**FIGURE 4.14**  
**Produce Department Sales Distribution : 1960-2000\***  
 --percent of total store sales--



\*Projected, \*\* Cornell Food Executive Program projections (Russo and McLaughlin 1991)

While produce directors only anticipate a 6.5 percent increase in their share of store sales (Figure 4.14), they expect the physical dimensions of their department to grow about one-third larger over the next 2 to 5 years (Figure 4.15). This projection may reflect their attempts to give more exposure to the growing number of products now carried.

**FIGURE 4.15**  
**Current and Projected Size of the Produce Department**  
**--square feet--**



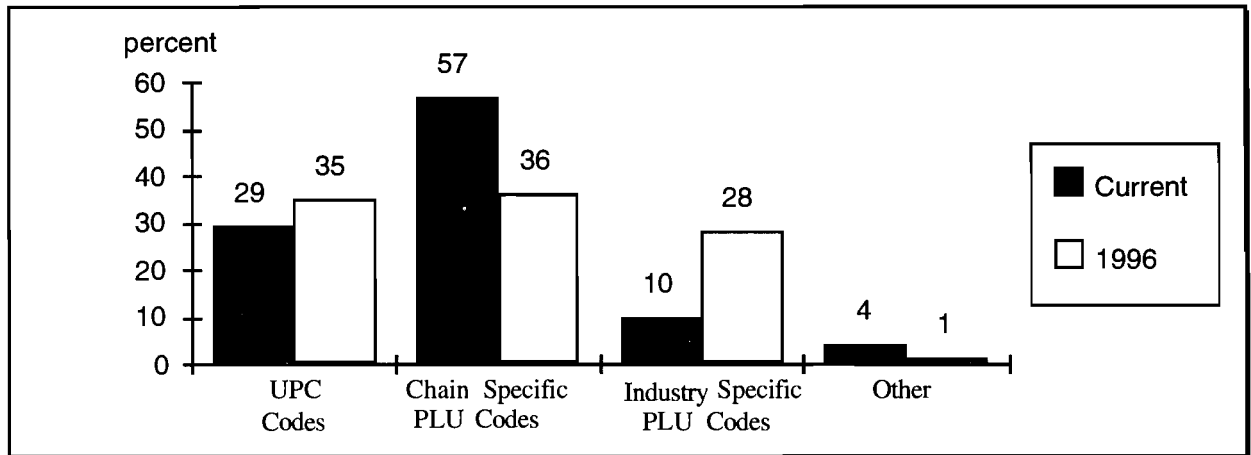
### Check-Out Procedures

Currently check-out procedures vary considerably among supermarket chains. Respondents report using chain specific PLU (Price Look Up) codes to check out slightly over one-half their produce sales currently, while the remainder rely first on UPC codes (29%), presumably for many non fresh or packaged items, and on industry specific PLU codes (10%). Perhaps surprisingly, the future does not promise any industry wide move towards uniformity. In fact, the situation in a way becomes more fragmented as respondents project an approximately equal usage of each check-out procedure (Figure 4.16) for the near future.

### Produce Department Importance

When asked to assess the attitudes of senior management in their companies regarding the importance of the produce departments now (1993) relative to what it was in the past (1980) and what they project it will be in the near future (1996), produce buyers believe that their department's status has been significantly elevated since 1980 (Figure 4.17). In 1980, only about half of senior management considered the produce department to be "very important" according to their produce buyers and directors but by 1993, fully 94 percent did. Furthermore, despite this overwhelming importance "vote" by senior management in 1993, produce buyers expect even more support by senior management in the future, as 96 percent report expecting the status of the department to be "very important."

**FIGURE 4.16**  
**Check-Out Procedures: Current and Future**  
 -- percent of respondents--



**FIGURE 4.17**  
**Senior Management View of Produce Department Importance**  
 --past, present, future--

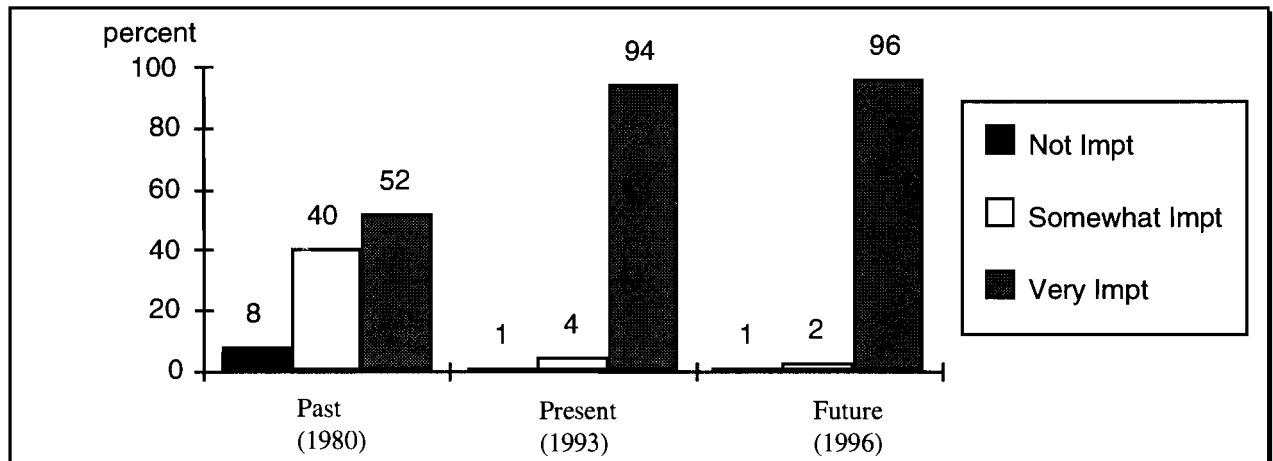


Table 4.13 sheds some light on the reasons why senior management is so positive about the status of the produce department. Among all departments in the store, produce is considered the key image-making department by senior managers, far ahead even of other perishable departments and also, importantly, produce is considered the key profit making department as well. Impressively, over twice as many produce buyers believe that produce is the key profit generating department than think that this leading status is held by the grocery department, traditionally the mainstay of the store.

**TABLE 4.13**  
**Department Importance: View of Senior Management**

<b>Department</b>	<b>Key IMAGING making department</b>	<b>Key PROFIT making department</b>
Produce	80%	56%
Grocery	0	27
Meat	14	5
Other dept.	6	12
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

### Strategic Implications and Perspectives

- *Having documented the impressive gains made by the produce department over the last several decades still does not diminish the sanguine composite of the future that emerges from the forecasts of our sample of produce buyers. Several perspectives in this regard are summarized below:*

- *Senior retail management, as perceived by produce buyers and directors, not only already views produce as the key image-making and profit-making department but they believe its status will be still higher by 1996 (Figure 4. 17, Table 4. 13.)*

- *Although the "distribution share" that the produce department constitutes of total store sales has grown by 35 percent to 9.2 percent of store sales since 1960, it is projected to hit nearly 10 percent by 1996 and nearly 12 percent by the year 2000. This growth is all the more impressive when it is considered that during the same time the underlying base of supermarket sales has itself expanded greatly as an outgrowth of grocery product proliferation and the tendency of supermarket companies to add new departments (e.g. seafood, delis, health and beauty care, general merchandise). The produce department is a bigger slice of a much bigger pie.*

- *Despite more than a doubling in the number of produce items carried by the average supermarket since 1960, buyers project this measure to grow by another 18 percent by 1996 (Figure 4.12) .*

- *Produce departments in 1993 generally account for about 10 percent of overall supermarket space but produce buyers and directors project this to grow by 36 percent, to 4,136 square feet, by 1996. Since they only forecast an 18 percent increase in item count but twice the increase in department space, it appears that one of two possibilities is likely: either 1) produce departments of the future will enjoy much more spaciousness and less congested aisles than is currently the case and/or 2) each commodity will be accorded considerably more space. Given the responsiveness of produce sales to increases in retail shelf space alone, this latter possibility bodes especially well for suppliers.*

- *There was no consensus from produce buyers on the preferred check-out procedure for the future (Figure 4.16.). Indeed, by 1996, produce directors appear*

*nearly equally divided between the three primary check-out methods available: UPC codes, chain-specific PLU coding and industry-specific coding. Although suppliers should probably be encouraged that fewer supermarket companies will be employing in-house "chain-specific" categories of PLU systems since "industry-specific" categories will generate more useful information for supplier-partners, the three equally sized systems projected indicate that suppliers will have to be prepared to gather and synthesize information in at least three different ways.*

## Section V: SUMMARY AND CONCLUSIONS

This study was conceived to document the changing role of the supermarket chain produce buyer in the context of the overall dynamics of produce industry buying and selling. This report has cast supermarket procurement as a critical yet under-researched part of the total produce system (Section 2).

The methodology employed for this research relied on both secondary information and primary data collection (Section 3). Current trends and various produce department statistics were synthesized from the available research reports as well as the trade press. Primary data were gathered from an extensive mail questionnaire sent to what amounts to the entire universe of supermarket chain produce buyers, 235 companies. Exactly one hundred chains responded to the survey, representing approximately 75 percent of overall supermarket chain produce sales. Finally, key industry leaders, both suppliers and chain buyers, were interviewed to assist with the interpretation of the survey data.

Section 4 presents the empirical results of the data collection process categorized according to five principal themes:

- **Supermarket produce department organization**
- **Produce buying process**
- **New product issues**
- **Produce department management: pricing and performance**
- **Produce department of the future: buyers' projections**

The exposition of the analyses conducted for each theme is followed by "perspectives and strategic implications" for the produce industry, in particular from the view of produce suppliers. Central to the process of formulating strategic initiatives to achieve continued progressive development in the produce industry is the need to respond to the following challenges and opportunities that emerge from the foregoing analyses.

### *A) Produce Buying Organization*

- Results to the current survey suggest that the "gap" may be widening between produce suppliers and supermarket buyers. The mean number of buyers per company (2.3 at headquarters) has not changed substantially in many years--indeed, several produce directors report that new technology allows them to operate with fewer buyers than in the past--despite the threefold explosion of new items in the produce department since 1960. As the much greater number of items in today's produce department compete for the buyer's fixed time, each is allocated less. Moreover, only a handful of the largest companies continue to employ field buyers, underscoring the expansive distances between the supplies in production areas and the retail buyer.

As wholesale and retail supermarket companies consolidate their operations, the number of total produce buyers contracts; only one produce director is needed when before there were two. Fewer buyer-seller contact points remain in the system. Of course, the implication of both of these trends is that suppliers of traditional commodities to the produce department are now competing for an increasingly scarce commodity themselves: the buyer's time.

- Produce buyers from larger chains spend considerably more time working with suppliers and considerably less time conferring with their own store personnel than do buyers from smaller chains. A number of industry practitioners offered views on this result: compared to smaller chains, produce buyers in larger chains are more influenced by the policies of their grocery buyer colleagues to push for new distribution approaches with suppliers, such as "Efficient Consumer Response" and other of the latest initiatives in the grocery industry. Others indicated: larger buyers do not have to be as concerned with store level activities because of the greater attention which they receive from large suppliers who, it was suggested, offer more extensive levels of service and merchandising to large company stores. Several smaller grower/shippers furthered the view that larger buyers may align themselves more often with larger suppliers because it is frequently more difficult for a small supplier to meet the large volume requirements of the larger supermarket companies--in particular during a major ad. They claim larger retailers prefer to do business with suppliers who can offer "one-stop shopping." Some believe that the additional time that buyers from smaller chains spend on store-level activity may simply be explained by the extra attention that many smaller companies devote to more creative and attractive presentations.

### ***B) Produce Buying Process***

- Supermarket produce buyers have moved away from traditional terminal markets as the primary source of their produce supplies. Over at least the last two decades, the share of produce that supermarkets purchase directly from production areas, whether the transaction is negotiated by a broker or a shipper's sales agent, has continued to grow. Moreover, as retail firm size increases, this tendency accelerates: only 7 percent of the produce in the larger supermarket companies is procured at a terminal market, whereas smaller chains purchase slightly over one-third of their total produce needs at a terminal market.

Given the more rigorous demands of contemporary shoppers regarding produce quality combined with the retailer's inability to re-condition poor condition product and unwillingness to compromise their standards for a lower price, suppliers must be vigilant in the quality of produce they forward to their supermarket accounts.

- When ranking the most important product attributes on which they base purchase decisions, buyers voted clearly: "best quality available." Shippers take note: again, the quality imperative is repeated. "Price" only figured about half way down the list of ten leading factors. Naturally, for growers and shippers to convert this finding into meaningful strategy, they must probe their retail accounts for the various buyer interpretations of the elusive concept of "quality." To some, it may translate as "appearance and color" or perhaps a "minimum amount of bruising and shrink," to others quality may suggest "convenience, shelf-life or, increasingly, taste."

- Gross margin tradition remains dominant in produce buyers' decision-making calculus despite the supposed superiority of DPP as a preferred performance measure. This finding sends two signals to suppliers: first, if despite all evidence to the contrary, buyers insist on clinging to time-honored gross margin measures, then suppliers need to adjust products and marketing programs in ways to maximize their attractiveness based on the gross margin criterion. Second, suppliers should still ensure that their products rank high on other arguably more effective performance measures, like DPP, and then strive to create buyer awareness and understanding of the importance of such new

measures in the long run. The alert supplier must assist the buyer in applying innovative techniques to measure product and program success in new and appropriate ways.

- Buyers were quite negative regarding the importance of brands. This result needs to be interpreted cautiously, however: while, on the one hand, buyers are not apparently favorably impressed with a "brand" in and of itself, they do report being positively influenced by "quality, consistency, high margins, strong demand, competitive pricing, and innovative packaging"--the exact characteristics of a brand! Suppliers may be well advised to consider whether they want to position their new products as "consumer" brands with the strong in-store promotional material and electronic media that such a positioning implies, or whether they may be better off instead investing into building a brand franchise with the customer who matters most, the supermarket buyer.

- Of the leading four supplier attributes most valued by supermarket produce buyers, just one, "adequate supply," is likely to be in the province of the larger supplier only. The other top three--"consistent quality, reputation and price protection"--are all attributes that could be equally applied to small and medium sized suppliers as to larger firms. This should be interpreted very positively by grower/shippers who are concerned that supermarket companies are only interested in developing and maintaining relationships with the largest suppliers. The data indicate otherwise.

Most buyers do not yet evaluate "multicommodity assortment" from shippers as critical. This should be good news for the smaller, single-commodity producer of high quality products. Similarly, seasonal suppliers should be encouraged that year round availability was ranked less important than "quality," "appropriateness of season," and "competitive price." Finally, buyers ranked "strong promotion" from suppliers ahead of "strong advertising." Since all but the largest of suppliers cannot generally afford frequent media advertising, this again argues for the continued viability of small suppliers.

The bottom line is this: produce buyers continue to make decisions based on product quality, consumer demand and logistical support, not on advertisements, extensive product portfolios or consumer brands.

### *C) New Product Issues*

- Last year produce buyers were presented about 65 new products with an average acceptance rate of approximately 50 percent. But large retailers had a different experience than smaller retailers: they had nearly twice as many "value-added" products presented to them but only two-thirds as many non-fresh products. Moreover, larger companies appear to be slightly more favorable to new domestic products, while smaller companies seem to favor value-added and imported items. It is possible that larger companies are presented more new value-added items due to their greater perceived ability to handle the more exacting temperature control and equipment requirements of this sensitive new category.

- Non-fresh produce items accounted for the greatest numbers of new introductions in 1992, yet had the lowest acceptance rate and highest deletion rate. In fact, on average, more products in the non-fresh category were deleted than added, leaving a net reduction in the number of non-fresh items of approximately 3.5 items per

firm. If this annual rate is projected to the year 2000, only about 5 percent (25 items) in the department would be non-fresh, less than half of today's share. One implication: produce departments in the future are likely to be more receptive to new items from "fresh" suppliers but, conversely, less receptive to products from non-fresh sources.

- The most frequently available promotional support from suppliers is Point of Purchase (POP) material yet buyers rate its importance as extremely low when evaluating new products. Several produce buyers from larger companies stated that they spend millions of dollars for designers and architects to create the proper in-store environment and, resultingly, are generally unwilling to alter that environment with what one described as "merchandising clutter." Other retailers do not take this position, however, and actively encourage POP information. The supplier message: know the attitude of the customer vis-a-vis POP material, but given the unfavorable rating the majority of buyers gave to POP material in this survey, consider investing scarce marketing funds in areas that make a positive, not a negative, impression on buyers.

#### ***D) Management of the Produce Department: Pricing and Performance***

- This study sheds light on the perennial grower/shipper question, "Why are large swings in FOB prices not reflected in retail prices?" Grower/shipper prices play only a partial role in the techniques buyers use to set retail prices. Local market conditions and attracting customers through loss leader pricing are the two most prevalent pricing techniques yet neither of them is directly tied to FOB prices. If local market conditions are the single most important criterion to buyers as they establish retail prices, shippers interested in gaining maximum negotiation leverage would do well to arm themselves with such local market information. A number of views were put forward by buyers regarding their alleged unwillingness to lower retail prices to move greater volumes:

- A lower retail price may not result in additional retail sales if the reduced price is either (a) lowered by so little that consumers do not recognize the reduction or (b) low enough that the reduction is recognized by shoppers but not so low as to induce additional sales.
- If, like many staple food commodities, the produce item is characterized by a relatively inelastic retail demand (e.g. very limited sales response despite large price changes) then, once again, the retailer has nothing to gain and everything to lose if he lowers retail price. And the more he lowers it in a (futile) effort to stimulate greater volume movement, the more he loses, as the modest quantity increases cannot keep pace with the price declines. Naturally, this scenario would lead to a free-fall in total retail sales revenues.
- If the retailer faces an elastic demand for a particular produce item, it is theoretically possible to increase volume movement and total sales revenue by lowering price. However, many retailers feel that they have already discovered the "optimal price threshold" beyond which further price declines will not produce relatively greater volume increases.

Further, since, competitors' prices are the single biggest factor in retail price setting, competitor retaliation would be rapid and nearly certain. Thus any advantage gained by lowering a given retail price would be very short-lived. Finally, unlike packaged goods, increasing produce movement, whether by price

reductions or other means, is always constrained by the product's inherent perishability that prevents stockpiling in the home.

- Many retailers point out that consumers prefer "stable" prices. The growing prevalence of contract-type pricing lends some credence to the view that they are indeed interested in stable prices over a period of time longer than a few days or weeks. Of course, to the extent that such agreed-on price levels facilitate planning, planting, harvesting and shipping activities for growers and shippers, the entire produce system including consumers, benefits.
- Produce prices are established in concert with those of all other departments in the store by senior management. The resulting constellation of prices is an attempt to achieve one coherent image in the minds of a target consumer segment(s) for a given market area. Selecting the optimal mix of retail products to offer from the hundreds of thousands available and then choosing the price levels for each in order to produce overall bottom line success is perhaps the biggest single retail challenge, and enigma.
- Finally, it should be recalled from Section I, that over three-quarters of the marketing bill for fresh fruits and vegetables covers marketing-related activities that occur beyond the farm gate. The farm contribution is slightly less than a quarter of the total. Thus, it should not be surprising that even relatively large swings in the prices of a small component of the total consumer value are not always reflected in price changes of equal magnitude at the retail level.

- The leading criterion used by buyers to evaluate performance is overall sales.

Important implications for shippers can be derived, however, from examining the ways in which they can assist the retailers in improving the measures of performance that retailers rate highly. "Shrinkage and sales per labor hour," are both critical performance measures where astute suppliers have opportunities to help. Both firm-level and system wide remedies are called for. Proper shipper maintenance of cooling systems during packing and transportation can reduce subsequent retailer and total system wide costs. Similarly, supplier-initiated "value-added" activities at the shipping level, such as trimming and packaging programs, and even at the wholesale/retail level, such as appropriate secondary cartons, standardized pallets and merchandising support, can result in a remarkable differences. In every instance possible, shippers should be vigilant in seeking out such opportunities to improve their customers' operations.

- Buyers show little actual use of Direct Product Profit (DPP) as a measure of performance. Several reasons for this:

- The great seasonal variation in the mix of products in the produce department makes application of an "industry standard" difficult.
- Fluctuating supply patterns and varying shrink rates affect costs and thus the development of accurate Direct Product Costs more than other departments where DPP is more commonly employed.
- Merchandising and handling methods vary more in produce.
- Thus wholesale/retail labor requirements to develop and maintain accurate data to be able to apply DPP is simply unrealistic.

- The percentage of all produce arrivals at the average wholesale/retail warehouses that are rejected has decreased since a decade ago. However, the opposite is true for larger chains: the share of their total arrivals that were rejected increased by 40 percent compared to a decade ago. Several interpretations:

- Smaller firms are not as well staffed with quality control personnel, thus conduct less thorough inspections.
- Smaller firms are simply not as demanding of quality standards due to the less exacting shoppers.
- Smaller firms are more inclined to simply suggest that a "price adjustment" be made. Larger firms are likely not to compromise quality standards, at any price.
- Smaller firms do not possess as much "market power" vis-a-vis suppliers and thus have fewer options regarding (a) renegotiating with the initial supplier and (b) fulfilling the product need from another source on very short notice.

- Buyers require at least two weeks and perhaps as much as several months in order to adequately plan their weekly ads. Yet well over one-half of all produce suppliers may not be able to offer a firm price on a major ad one month in advance. Suppliers able to provide pricing stability for longer periods of time will win new retail accounts.

- Relatively large volume increases can be motivated by various non-price related merchandising approaches. Produce suppliers need greater levels of experimentation with key retailers to identify new and more effective ways to market and sell fresh produce. The testing of new merchandising mixes, creative space allocations schemes, and innovation in variety management is an overdue opportunity for many shippers.

- Already, one-third of produce buyers use or are considering using category management systems in the near future. Such systems will accord "bottom-line" profit responsibility to produce buyers for entire categories of fresh produce: attaining budgeted sales, gross margin, net dollars, and market share. But, buyers will have to enter into new and more committed partnerships with key suppliers. Information must be exchanged more freely, mutual benefits must be self evident, and both supplier and retailer must be committed to learning, responding, reacting and continually improving. Such alliances represent a "sea-change" in many of the adversarial buyer-seller relationships that currently exist in the produce industry.

### *E) Buyer Projections on Produce Department Status and Operations in the Future*

• Despite impressive gains made by the produce department over the last decade, retailers are bullish on the future. Several perspectives in this regard are summarized below:

- Senior retail management views produce as the key image-making and profit-making department but they believe its status will be still higher by 1996.
- Produce "distribution" is projected to hit nearly 10 percent by 1996 and nearly 12 percent by the year 2000. This growth is all the more impressive when considering the new products and departments that are being added to many supermarkets. The produce department will be a bigger slice of a much bigger pie.
- Despite more than a doubling in produce items carried by the average supermarket since 1960, buyers project this to grow by another 18 percent by 1996.
- Buyers and directors project produce space to grow by 36 percent, to 4,136 square feet, by 1996. Since they only forecast an 18 percent increase in item count, it appears that either: (1) produce departments will enjoy much more spaciousness and/or (2) each commodity will be accorded considerably more space. Given the responsiveness of produce sales to increases in retail shelf space alone, this latter possibility bodes especially well for suppliers.

• By 1996, produce directors appear equally divided between the three primary check-out methods available: UPC, chain-specific PLUs and industry-specific PLUs. Although suppliers should probably be encouraged that fewer supermarket companies will be employing in-house "chain-specific" categories of PLU systems since "industry-specific" categories will generate more useful information for supplier-partners, the three equally sized systems projected indicate that suppliers will have to be prepared to gather and synthesize information in at least three different ways

### *F) A Final Perspective*

• The new developments and projected directions in this report represent exciting opportunities for produce suppliers to forge new relationships with their key accounts. Leading retailers are already underway with the initial stages. The advent of such new relationships afford suppliers an unique chance to develop bold new initiatives: long-term deals, contract pricing, flexible marketing funds, "continuous replenishment," electronic data exchange capabilities (e.g. purchase orders, pricing and promotional information, invoicing), inventory management, direct-to-store shipment opportunities, shared demand-forecasting and others. Adding value to basic commodities through service, information and efficiencies will mark the successful produce suppliers of the future.

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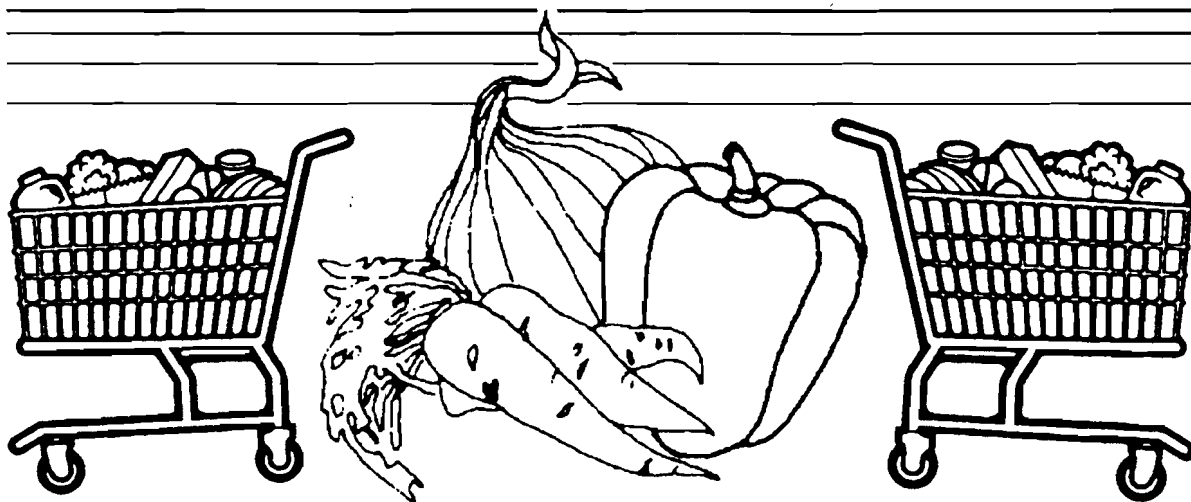
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## Appendix



# *Produce Buyers Survey*

**The purpose of this survey is to better understand the key decision making process of produce buyers in U.S. supermarkets.**

*Sponsored by:*  
Food Industry Management Program  
Cornell University, Ithaca, NY 14853  
and  
Produce Marketing Association  
Newark, Delaware

## SECTION A: BUYERS

1) What is the total number of *produce buyers* in your company?

\_\_\_\_\_ Total number of HEADQUARTERS BUYERS  
\_\_\_\_\_ Total number of DIVISION/REGIONAL BUYERS  
\_\_\_\_\_ Total number of FIELD BUYERS

2) In your company, what percent of a typical produce buyer's time is devoted to the following major job responsibilities?

*(Please give approximate percentage for each activity)*

- |   |         |
|---|---------|
| a. Reviewing new item .....   | _____ % |
| b. Assisting in development of marketing and merchandising plans .....  | _____ % |
| c. Order entry, price changes, handling invoice problems .....  | _____ % |
| d. Meeting or talking on the phone with suppliers (sales managers, field personnel, etc.) to cover routine business ..... | _____ % |
| e. Conferring with quality control/warehouse receiving .....  | _____ % |
| f. Conferring with store personnel .....  | _____ % |
| g. Other <i>(Please Specify)</i> _____  | _____ % |

TOTAL = 100 %

3) What percentage of your company's produce is purchased from the following sources?  
*(Please give approximate percentages for each category.)*

- |                                       |         |
|---------------------------------------|---------|
| 1 Direct (grower/shipper) .....       | _____ % |
| 2 Broker (buying or selling) .....    | _____ % |
| 3 Terminal Market Wholesaler .....    | _____ % |
| 4 Other <i>(Please Specify)</i> ..... | _____ % |

TOTAL = 100 %

4) How important are each of the following *product attributes* to you (your company buyers) in deciding to place an order for a produce item?

(Please circle ONE response per item.)

	NOT IMPORTANT	SOMEWHAT IMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT
<b>PRODUCT ATTRIBUTES</b>					
a. High gross margin opportunity .....	1	2	3	4	5
b. High net margin/DPP rating .....	1	2	3	4	5
c. Few items already in-house that might compete with a new item.....	1	2	3	4	5
d. Large number of retail firms in the market have already added the item .....	1	2	3	4	5
e. Best quality (flavor, consistency) available .....	1	2	3	4	5
f. Innovative package design .....	1	2	3	4	5
g. Price levels competitive with similar products ..	1	2	3	4	5
h. Strong demand for the item .....	1	2	3	4	5
i. Appropriate for current season of year .....	1	2	3	4	5
j. Year round availability .....	1	2	3	4	5
k. Product is branded .....	1	2	3	4	5

5) How important to you and your shoppers is year round product availability today, relative to 10 years ago? (Please circle ONE response.)

MUCH LESS IMPORTANT	LESS IMPORTANT	ABOUT THE SAME	SOMEWHAT IMPORTANT	MUCH MORE IMPORTANT
1	2	3	4	5

6a.) In your opinion, with all other factors (e.g., quality and price) equal, to what extent do your shoppers prefer locally grown produce? (Circle ONE response.)

NEVER	ALMOST NEVER	SOMETIMES	OFTEN	ALWAYS
1	2	3	4	5

6b.) To what extent do you find these other factors (e.g., quality and price) in locally grown produce equal to that of the major growing areas?

NEVER	ALMOST NEVER	SOMETIMES	OFTEN	ALWAYS
1	2	3	4	5

7) How important are each of the following *supplier attributes* to you (your company buyers) in deciding to place an order for a produce item:

(Please circle ONE response per item.)

SUPPLIER ATTRIBUTES	NOT IMPORTANT	SOMEWHAT IMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT
a. Positive reputation of supplier .....	1	2	3	4	5
b. Strong supplier promotion (e.g., in-store sampling, coupons, POP materials, etc.) .....	1	2	3	4	5
c. Strong supplier advertising support, (e.g., T.V advertising) .....	1	2	3	4	5
d. Supply large enough to fill demand for the majority of my stores .....	1	2	3	4	5
e. "One stop shopping" due to broad line of supplier products .....	1	2	3	4	5
f. Superior test market or market research results .....	1	2	3	4	5
g. Low minimum order quantities .....	1	2	3	4	5
h. "Price" protection on rising markets .....	1	2	3	4	5
i. Delivers consistent quality .....	1	2	3	4	5

8) To what extent do you engage in some type of "contract" pricing with shippers for selected items or commodities? [By "contract" pricing we mean any agreement where multiple orders are placed over time, e.g., an entire season or year at a pre-determined price(s).] (Please circle ONE response per period of time).

	NEVER	OCCASIONALLY	SOMETIMES	OFTEN	ALWAYS	COMMODITY
a. Monthly .....	1	2	3	4	5	_____
b. Quarterly .....	1	2	3	4	5	_____
c. Yearly .....	1	2	3	4	5	_____

9) How many times per year do you visit a growing or packing operation?

	NEVER	2-3 X/YR	4 OR MORE/YR
a. In state .....	1	2	3
b. Out of state .....	1	2	3
c. Foreign .....	1	2	3

10) Please indicate the total produce shrinkage (explained and unexplained) or loss factor (as a % of produce sales) in your warehouse and retail store.

	TOTAL	
Warehouse	_____	%
Retail store	_____	%
Total	_____	%

11) On average, what percent of total produce loads were rejected at your warehouse in the following years?

1981-82 \_\_\_\_\_ %                      1991-92 \_\_\_\_\_ %

**SECTION B: PRODUCT ACCEPTANCE ISSUES**

1) How many *new* fresh and non-fresh produce products were presented to your company last year and how many were accepted? [A *new product* is defined in this study as any produce item that requires a new SKU, that is, excluding simply new crops or other items that are normally seasonal].

	# OF NEW PRODUCE PRODUCTS	
	PRESENTED	ACCEPTED
<b>1 FRESH PRODUCTS</b>		
a. Domestic new varieties (e.g. broccoflower) .....	_____	_____
b. "Value Added" (e.g. packaged precut vegetables).....	_____	_____
c. Imported items (e.g. "prickly" pears) .....	_____	_____
<b>2 ALL NON-FRESH PRODUCTS.....</b>	_____	_____
<b>TOTAL NUMBER OF NEW PRODUCE PRODUCTS .....</b>	_____	_____

2) During the past year, approximately how many fresh and non-fresh produce items were deleted from an average produce department in your company (excluding seasonal changes)?

\_\_\_\_\_ # FRESH PRODUCE ITEMS DELETED

\_\_\_\_\_ # NON-FRESH PRODUCE ITEMS DELETED

3) Please indicate the major reason(s) why these items were deleted.

1 \_\_\_\_\_

2 \_\_\_\_\_

4) Please indicate what type of product information you would like to have for a new produce item by circling a number on the following scale for each of the following. (Please circle ONE number for each response.)

	NOT IMPORTANT	SOMEWHAT IMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT
a. Test market research/results .....	1	2	3	4	5
b. Point of purchase displays .....	1	2	3	4	5
c. Preparation and recipe information .....	1	2	3	4	5
d. Ripeness information .....	1	2	3	4	5
e. Promotional support from vendors (e.g. samples)	1	2	3	4	5
f. Nutritional information .....	1	2	3	4	5
g. Residue-free evidence .....	1	2	3	4	5
h. Potential profitability .....	1	2	3	4	5
i. Retail cost of item .....	1	2	3	4	5
j. Supply availability .....	1	2	3	4	5
i. Other (Please Specify) .....	1	2	3	4	5

5) When introducing a new produce item, who do you, the produce buyer, believe should have the *primary responsibility* for providing marketing and promotion information to shoppers (e.g.. T.V. ads, recipes, POP displays etc.)? (Circle ONE response.)

- |                           |                               |
|---------------------------|-------------------------------|
| a. Supplier               | d. National trade association |
| b. Retailer               | e. Other (Please Specify)     |
| c. Commodity organization | _____                         |

6) Approximately what percentage of your suppliers offer the following?

- |                         |         |
|-------------------------|---------|
| a. TV advertising       | _____ % |
| b. Radio                | _____ % |
| c. Coupons              | _____ % |
| d. Newspaper ad support | _____ % |
| e. In store POP         | _____ % |

**SECTION C: ABOUT YOUR PRODUCE DEPARTMENT**

- 1) Please approximate the total number of items carried by your produce department (excluding floral), the percent of those items that were *fresh* products, and the percent of total store sales that is contributed by the produce department (excluding floral) in the following years.

YEAR	TOTAL # ITEMS	% FRESH	% DISTRIBUTION
1960.....	_____	_____	_____
1970.....	_____	_____	_____
1980.....	_____	_____	_____
1990.....	_____	_____	_____
(PROJECTED) 1996.....	_____	_____	_____

- 2) What is the average size of the produce departments in your company's current and future stores?

\_\_\_\_\_ SQUARE FEET (CURRENT)

\_\_\_\_\_ SQUARE FEET (FUTURE- NEXT 2-5 YEARS)

- 3) What is the current involvement that your company has in "shelf/category management systems" for the produce department? (Please circle ONE response.)

- a. Do not currently use
- b. Do not currently use but are considering one
- c. Have begun to use within the last year on selected produce items
- d. Have been experimenting with for several years and are SATISFIED with the performance
- e. Have been experimenting with for several years but are UNSATISFIED with the performance

- 4) Please indicate how often each of the following price setting techniques is used for your company's produce pricing the majority of time. (Please circle ONE response for each item.)

	NEVER	OCCASIONALLY	SOMETIMES	OFTEN	ALWAYS
a. Apply a fixed percent markup .....	1	2	3	4	5
b. Apply a fixed dollar markup .....	1	2	3	4	5
c. Price based on local competition .....	1	2	3	4	5
d. Price according to what traffic will bear .....	1	2	3	4	5
e. Loss leader pricing to build store traffic .....	1	2	3	4	5

5) Below is a list of performance measures. Please indicate the importance and frequency of use for each by circling one response on each scale.

How often is this used?			How important is this measure?			
NEVER	SOMETIMES	ALWAYS	Not IMPORTANT	Not SURE	VERY IMPORTANT	
1	2	3	a. Sales per square feet	1	2	3
1	2	3	b. DPP	1	2	3
1	2	3	c. Overall sales	1	2	3
1	2	3	d. Sales per labor hour	1	2	3
1	2	3	e. Sales per customer	1	2	3
1	2	3	f. Gross margin ROI	1	2	3
1	2	3	g. Shrinkage/loss	1	2	3
1	2	3	h. Other (Please Specify)	1	2	3

6) Approximately what percent of the following check-out procedures are used in your firm's produce sales?

	CURRENTLY	PROJECTED 1996
a. Scanned employing UPC labels	_____ %	_____ %
b. Checked out employing chain specific PLU codes	_____ %	_____ %
c. Checked out employing industry specific PLU codes	_____ %	_____ %
d. Other check out procedures	_____ %	_____ %
	= 100%	= 100%

7) What is your planning horizon for the following activities? (Please circle ONE response.)

	ONE DAY	ONE WEEK	TWO MONTHS	ONE MONTH	SIX MONTHS	OTHER (PLEASE SPECIFY)
a. Establishing normal weekly ad programs	1	2	3	4	5	6 _____
b. Developing front page, loss leader ad	1	2	3	4	5	6 _____
c. Price setting	1	2	3	4	5	6 _____
d. Introducing a new item	1	2	3	4	5	6 _____

- 8) We are interested in the typical sales increase (volume movement) you would expect for a standard produce item from *each* of the following promotional activities and price points listed below. [When a standard produce product (e.g., bananas or potatoes) is not promoted and is sold for its regular shelf price, its sales movement is indexed at 100 (e.g., normal sales movement). If, for example when the price of the product is reduced by 10%, sales increase by 12%, the index in the adjacent cell should be 112; similarly, if when the price of this same product is lowered by 25%, sales increase by 30%, the next cell should be indexed at 130, and so on. ]

ACTIVITY	SALES INCREASES		
	AT REGULAR PRICE	IF PRICE WAS REDUCED BY 10%	IF PRICE WAS REDUCED BY 25%
	(Index)	-10%	-25%
1. Non-promoted	100		
2. Major ad only			
3. Minor ad only			
4. Retailer coupon			
5. 50% greater shelf space			
6. In-store demo/sampling			

- 9) How would you assess the attitudes of the senior management in your company regarding the importance of the produce department in the “past”, “present” and “future”? (Please circle ONE response on each of the 3 scales.)

	NOT IMPORTANT	SOMEWHAT IMPORTANT	NOT SURE	IMPORTANT	VERY IMPORTANT
PAST (1980)	1	2	3	4	5
PRESENT (1993)	1	2	3	4	5
FUTURE (1996)	1	2	3	4	5

- 10) In your opinion, which department in your company/stores today is regarded as the key *image making* department by your senior management?

\_\_\_\_\_ is the key image making department.

- 11) In your opinion, which department in your company/stores today would you say is regarded as the key *profit making* department by your senior management?

\_\_\_\_\_ is the key profit making department.

**SECTION D: PERSONAL BACKGROUND**

1) What is your present job title?

\_\_\_\_\_

2) Do you work at: *(Please circle ONE response.)*

1 **Company headquarters**

2 **Division office**

2a) If you work at your company headquarters, for what percentage of your company's total stores do you have produce buying responsibility?

\_\_\_\_\_ % TOTAL STORES

3) How many years have you been an employee of your company?

\_\_\_\_\_ YEARS EMPLOYED

4) How long have you been in your current position?

\_\_\_\_\_ YEARS

5) What type of specific produce related training have you received?

*(Please list and describe briefly.)*

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

6) What is the highest educational degree you received?

*(Please circle ONE response.)*

1 **High school diploma**                      3 **Four year college degree**

2 **Two year college degree**              4 **Graduate degree**

7) How old were you on your last birthday? \_\_\_\_\_ YEARS OLD

8) Are you:            1 **MALE**                                      2 **FEMALE**

**THANK YOU FOR YOUR HELP IN THIS IMPORTANT STUDY!  
PLEASE ENCLOSE THE COMPLETED QUESTIONNAIRE IN THE  
ENVELOPE PROVIDED AND MAIL IT TO US TODAY.**

If you would like a copy of the report of the survey results, please provide the following information. *(This page will be separated from the questionnaire to ensure the anonymity of your response.)*

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Company \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Additionally, we would be happy to send you a copy of any of the following recent Cornell Food Industry Management Program research reports. Please check those of interest and we will enclose them with the survey results.

- \_\_\_\_\_ McLaughlin, Edward W. and Vithala R. Rao, "The Strategic Role of Supermarket Buyer Intermediaries in New Product Selection: Public Policy Implications."
- \_\_\_\_\_ McLaughlin, Edward W., Gerard Hawkes, and Debra Perosio, "Wholesale Club Stores: The Emerging Challenge."
- \_\_\_\_\_ Russo, David M. and Edward W. McLaughlin, "The Year 2000: A Food Industry Forecast."
- \_\_\_\_\_ Fredericks, Peter J. and Edward W. McLaughlin, "New Product Procurement: A Summary of Buying Practices and Acceptance Criteria at U.S. Supermarket Chains."

If you have any questions regarding the study or this questionnaire please contact:

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