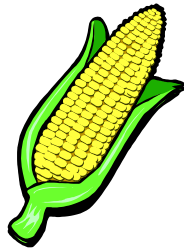


**Market Development Strategies for
Fresh Sweet Corn
Based Upon Consumer and Trade Surveys**



**A Research Report
Submitted to the Southern Supersweet
Corn Council
December 13, 2001**

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EXECUTIVE SUMMARY

The Retailer Survey

- Executives of 39 of the top 55 supermarket chains were successfully interviewed. Seventeen of the top 20 firms provided data. In total, the 39 cooperating firms had combined sales of nearly \$222 billion in 1999. These 39 firms accounted for 82% of the total sales of the 55 chains operating in the study region, i.e., east of the Mississippi River, and Texas.
- Senior executives responsible for buying and merchandising produce were interviewed. On average, interviewees had 27 years' experience.
- The following highlights are organized into five major topics: Retailers' evaluations of (1) the basic product, (2) shipping containers, (3) retailers' in-store merchandising and promotion practices, (4) factors affecting sweet corn advertising, and (5) effectiveness of the Southern Supersweet identity.
- Data from interviews were analyzed by firm size. "Very Large" firms were those with total sales in excess of \$10 billion, "Large" firms had sales of approximately \$2.273 to \$7.197 billion, "Medium" had sales of \$1.0 to \$2.268 billion, and "Small" had sales of \$387 million to just under \$1.0 billion.

Evaluation of the Basic Product

- The majority of very large firms had no particular preference on sweet corn color. A few preferred white. Smaller firms expressed a relatively strong, emerging preference for bicolor.
- Over the next five years, overall projected sales of white corn are likely to remain fairly consistent, while yellow is likely to suffer a sizeable decline. Bicolor sales are projected to capture virtually all sales lost by yellow varieties.
- When asked about preferences for specific "varieties", "Southern Supersweet" was mentioned by 6 of the 7 very large firms and 4 of 8 of the large firms. Overall, 16 of 39 firms (41%) expressed a preference for Southern Supersweet. This is especially encouraging because this was an unaided recall question. Thus, it appears that there is a high level of awareness of Southern Supersweet corn among the very largest firms.
- When asked what should be done to improve the basic product, i.e., the corn itself, 16 of 39 firms (41%) indicated that they were pleased with the product coming from southern growers.

- About one-third of the retailers suggested improvements to corn such as improved sweetness and flavor, longer shelf life, bigger ears, green shuck, and consistent fill.
- Three firms mentioned improvements in quality of pack issues, such as consistent size of ears and accurate ear count.

Evaluation of Shipping Containers

- Only three of the very large and four of the large firms have had first hand experience with Returnable Plastic Containers. None of the medium or small firms had received sweet corn in RPCs. Almost all had received corn in wirebound wooden crates, and about three-fourths had received corn in corrugated boxes.
- The very large chains anticipate significant increases in usage of RPCs over the next five years, going from about 14 percent of total in 2000-01 to nearly 44 percent in 2005-05.
- RPC usage by large firms is projected to increase from about 25 percent in 2000-01 to 80 percent in 2005-06.
- Corrugated box usage was projected to increase for all firm size categories except for large firms (most of which anticipated going to RPCs). Overall usage of corrugated boxes was projected to go from about 17 percent to 32 percent over the next 5 years.
- Increases in RPC and corrugated box usage were projected to come at the expense of wirebound crates. Overall usage of wirebound crates was projected to decline from about 70 percent to 24 percent over the next five years.
- Retailers using the various types of containers were asked to rate the key attributes, such as protection of product from bruising, quick cooling, ease of handling (at retail), suitability for display, ease of return or disposal, and overall satisfaction, using a 0 – 10 rating scale. Zero represented extremely poor, and 10 excellent. RPCs received the highest ratings on all attributes except protection from bruising, where corrugated boxes prevailed. In general, wirebound crates received the lowest ratings.
- Overall satisfaction ratings for RPCs, corrugated boxes and wirebound crates were 7.3, 6.6, and 4.4 respectively.
- Firms using RPCs generally like them very much, citing better cooling, ease of handling, labor savings and better display qualities.

- Although several very large and larger firms indicated RPCs were worth a “premium”, most said they were not, and almost all refused to indicate a premium amount.
- There is a generally pervasive dislike of wirebound crates. Reasons include damage to the corn, injuries to workers, poor display qualities, and disposal problems.
- Only one user of RPCs was willing to give a disposal/return cost estimate for RPCs, and his estimate was 10 cents per container. Disposal cost estimates for wirebound crates and corrugated boxes were identical, averaging 19 cents per container and ranging from zero to 75 cents.

In-Store Merchandising and Promotion Practices

- When not featured on ad, just over 73 percent of sweet corn is sold bulk, unshucked, about 25 percent is sold partially shucked in tray packs, and only 2 percent is sold completely shucked in tray packs.
- When featured on ad, over 90 percent is sold bulk, unshucked, about 8 percent is sold partially shucked in tray packs and only one percent is sold completely shucked in tray packs.
- When not featured on ad, 95 percent of all firms use refrigerated displays. However, when sweet corn is featured or advertised, over two-thirds (86 percent of the very large firms) use unrefrigerated displays. Thus, there may be some product deterioration during advertised periods, especially in stores with relatively low sales volume.
- When not featured or advertised, few firms sell sweet corn directly out of shipping containers. Less than 5 percent of sweet corn volume is sold in this manner. However, when corn is featured on an ad, nearly one-third of total volume is sold directly out of containers. Thus display qualities are very important during high sales volume periods.
- A wide variety of produce items are typically merchandised along side sweet corn in most stores. Green beans, potatoes, “greens”, “cooking” vegetables, “hard” vegetables such as broccoli and carrots and many others were mentioned. Many of the items mentioned require far more cooking time than does sweet corn. It may be advantageous to identify several complimentary vegetables that can be promoted along with sweet corn as “quick cooking”, convenience dishes.
- Non-produce tie-ins were pretty predictable: heavy on butter, squeeze butter/margarine, salt, corn skewers, spices, and grilling items. Some of these items may afford an opportunity for cooperative promotional activities.

- Price cards, recipes, and nutritional brochures were some of the most widely used point of sale materials. Radio/TV spots were also used by about 40 – 50 percent of all firms. However, price cards provided by outside groups have limited appeal to some firms because of unique size, style requirements.
- When asked what kinds of POS materials supplied by the sweet corn industry would likely be used, recipe cards were the most popular, with interest expressed by 28 of 39 firms representing over 12,000 stores and \$175 billion in sales.
- Electronic ad slicks were the second most popular item, likely to be used by 27 firms representing about 10,600 stores and \$161.7 billion in sales.
- Hard copy ad slicks were next in popularity appealing to 24 firms with over 9,000 stores and sales of \$117 billion.
- Other popular items included banners, posters, and radio scripts.

Factors Affecting Sweet Corn Advertising

- All firm sizes advertised sweet corn prior to Memorial Day, the Fourth of July and Labor Day. Other dates mentioned included the Easter holidays, summer (July and August), Father’s Day, Mother’s Day, Cinco de Mayo and Canada’s Thanksgiving.
- Across firm sizes, 84 percent of respondents indicated that weather directly affects sweet corn sales.
- The decision to advertise sweet corn, however, is not affected by local weather conditions, according to 61 percent of all respondents. Interviewees perceive improvement in sweet corn sales in warmer weather due to product availability, seasonal quality, and the suitability of sweet corn for warmer weather cooking activities, i.e. outdoor grilling.
- The primary responses across firms indicate that sweet corn competes with all other produce items for promotional consideration, specifically melons, berries, soft fruits and cooking vegetables. In contrast, two large firms believe that sweet corn “stands alone” when advertising decisions are made.
- Major market conditions, including sweet corn price, quality and availability, were mentioned by all firms as the main factors affecting retailers’ advertising decisions.

- Improvement of the pricing structure emerged as the number one way producers can encourage retailers to advertise sweet corn more aggressively during the late September through early July season. Correction of the current wide fluctuations in product prices and requests for future provision of “good ad price” produce were offered as motivations which would inspire all firms.

The “Southern Supersweet” Identity

- As indicated above, the trade has a fairly strong preference for “Southern Supersweet” which they view as a “variety”. Fortunately this preference is especially strong among the very large and large firms.
- The “Southern Supersweet Corn Council” does not enjoy a broad based awareness within the trade. Only six firms, 15 percent of the total recognized the name. In contrast, 10 executives said they were aware of the “American Sweet Corn Association” (26 percent) and 14 knew about the “Florida Federation of Sweet Corn Growers” (36 percent).
- Overall, 7 firms (18 percent) said they remembered receiving promotional materials for “Southern Supersweet Corn”.
- When asked to evaluate “Southern Supersweet Corn” as a trade name, only seven firms rated it as “very effective”; the same numbers rated it “moderately effective” and “slightly effective”. Sixteen firms (41 percent) rated the name “Not at all effective”.
- Although some respondents made positive comments about the “Southern Supersweet Corn” trade name, others criticized it for the “southern” connotation. “Supersweet” definitely has positive connotations and relatively wide awareness, but “southern” does not appear to enhance the overall product image.
- Not one firm expressed a preference for a branded product versus generic sweet corn. Most said there was no difference in profitability. Several did say that branded was slightly more profitable than generic, and one said it was considerably more. However, two firms said it was less profitable.
- It appears that the trade recognition and appreciation of the “Supersweet” identity is still too low to command a premium. However with greater emphasis on trade communication and promotion, “Supersweet” could quickly evolve into a premium product with an excellent image.

The Consumer Sample and General Purchase Patterns

A total of 1,031 consumer telephone interviews were conducted in Dallas, Atlanta, Chicago, Boston and Philadelphia between September 7 and November 3, 2001.

- The questionnaire was developed after meeting with major sweet corn growers and shippers.
- The consumer sample was generated using a random digit dialing technique (RDD). Interviews were conducted by staff of the University of Florida's Survey Research Center, and averaged approximately 10 minutes in length.
- Approximately two-thirds (67.7 percent) of all households were found to buy fresh sweet corn at least once each year.
- The proportion of sweet corn buyers increases with household size, income (57.8 percent at <\$20K to 82.5 percent at >\$70K) and education.
- Middle-aged consumers are more likely to buy sweet corn than young consumers. Only 56 percent of the respondents in the 18 to 34 age group buy sweet corn, in contrast with 82 percent of those 50 to 64 years of age. Future promotional effort should target the younger shoppers to convert them to sweet corn users.
- Women are slightly more likely to buy sweet corn than men, even though the men and women interviewed were the primary shoppers for fresh produce. However, race and ethnicity do not affect the likelihood of being a sweet-corn buyer.
- The most-commonly cited reason for not buying corn is that the respondent does not like the taste (30 percent). The amount of preparation time or inconvenience (22 percent), and messiness (7 percent) were frequently given reasons. Other reasons were lack of freshness (8 percent), do not cook (7 percent), and prefer canned or frozen corn (7 percent). Based on these findings, every effort should be made to reduce preparation time (perhaps by promoting microwave cooking) and to offer ready-to-cook product if quality can be preserved.
- People in Chicago and Philadelphia are most likely to buy sweet corn, with 73.6 percent of respondents and 72.3 percent, respectively, buying sweet corn. Consumers in these cities also tend to buy more ears of corn in each purchase: 7.3 and 8.0, respectively.
- The city with the lowest fraction of corn consumers is Dallas with 62.2 percent. Consumers in Dallas typically buy 5.3 ears of corn in each purchase.
- The price considered to be "fair" by those who buy corn averaged \$0.28 per ear.
- At \$0.35 per ear, the average "fair" price in Atlanta is nearly 50 percent higher than the average price in Chicago of \$0.21 per ear.

- Consumers did not express a strong preference for any variety of sweet corn. Only 16.5 percent of those who buy sweet corn expressed a preference for any variety at all. In fact, many of these did not mention a variety at all, but a store name.
- “Southern Supersweet” was mentioned as a preferred “variety” by less than one percent of all sweet-corn buyers.
- Consumers in Dallas and Chicago expressed strong preferences for yellow corn (62 percent).
- Philadelphia showed a marked preference for white corn over yellow corn, (52 percent, as opposed to 39 percent).
- Preferences for yellow corn tend to diminish as income levels increase.
- Asians, Hispanics, and Blacks have a very clear preference for yellow corn.
- The most important reason given for any color preference is that the respondent thinks it tastes better. This is especially true for white and bi-color buyers (over 62 percent) who also mentioned “sweeter” twice as frequently as yellow corn buyers.
- “Habit” was the one reason frequently mentioned by yellow-corn buyers (26 percent) that was not an important reason for other corn buyers (5 to 7 percent). “Appealing Color” was important to those buying bi-color corn (21 percent), and to those buying yellow corn (18 percent).

Seasonal Purchasing Patterns

- Dramatic seasonal differences were found in the number of households buying sweet corn. Virtually all sweet corn consuming households buy it in the summer, but only 36 percent buy it in the winter, 71 percent in the spring, and only 49 percent in the fall.
- The overwhelming majority of the winter, spring, and fall non-buyers (70%, 57%, and 63% respectively) said they did not buy fresh sweet corn because it was “not available”.
- About 12 to 14 percent, depending on the season, said they did not buy it because it was not fresh.
- High prices were cited as a reason for not buying fresh sweet corn by only 5 percent. This number was consistent over the winter, spring, and fall seasons.

- “Not locally grown” was cited as a reason by about 4 to 8 percent of the respondents, and approximately the same percentages said they did not like the taste in winter, spring, and fall seasons.
- A few respondents mentioned a variety of reasons for not buying sweet corn in these seasons but most were not judged to be an indictment of product quality, or shipping practices.
- Percentages of sweet corn purchases were significantly lower in Boston and Chicago during the winter, spring, and fall seasons. More than likely this is a weather related phenomenon, a reflection of the strong association of sweet corn and summer, and the perception that sweet corn is not available in colder months. It is also likely that the city buying patterns are affected by the racial/ethnic composition.
- Seasonal purchase patterns were similar for Blacks and Hispanics. Surprisingly, higher percentages of Blacks and Hispanics purchase sweet corn in the winter, spring, and fall than White Non-Hispanics and Asians.
- There were no strong relationships between the seasonal percentages of sweet corn buyers and income or education.

Consumers’ Evaluations of Packaging Type, Shucking Location and Refrigeration

- Overall, nearly 75 percent of sweet corn consumers prefer to purchase loose (bulk) sweet corn, 16 percent purchase fully shucked, pre-packaged, and about nine percent prefer partially shucked, pre-packaged product. Retailers should be urged to offer bulk sweet corn even in the winter, spring and fall seasons. Bulk displays convey freshness and better meet consumers’ preferences.
- Boston respondents were the most likely to prefer bulk (non-packaged) sweet corn. Respondents that were White non-Hispanics, college educated, and earning \$50 to 69.9K annually, and between 35 to 49 years of age were also the largest segments preferring bulk sweet corn.. Consumers preferring partially shucked, pre-packaged sweet corn are most likely found in Dallas, are of Hispanic ethnicity, college educated, earn \$20 to 34.9K annually, and are between 18-34 years of age. Buyers of fully shucked, pre-packed sweet corn are most likely in Dallas, Black non-Hispanics, high school educated, earn less than \$20K annually, and aged 65 or older.
- In general, more than 83 percent of sweet corn consumers prefer to shuck their purchases at home. The groups most likely to shuck corn in the store include approximately 21 percent of Chicago sweet corn consumers, about 42 percent of Asian consumers.

- The majority of sweet corn buyers, almost 62 percent, prefer to select unrefrigerated product from their retail outlets. This percentage ranged from about 50 percent in Dallas to 73 percent in Boston. This indicates that a majority of sweet corn purchasers do not realize the importance of refrigeration in maintaining product quality. Educational messages aimed at consumers should stress the importance of refrigeration.

Sweet Corn Purchases by Type of Retail Outlet, Sources of Information for Sweet Corn, and Recall of Promotional Methods

- Supermarkets are the retail outlet of choice for just over 62 percent of all sweet corn consumers. Specialty produce stores are the second most popular source of sweet corn, and were frequented by almost 13 percent of all sweet corn buyers. While the importance of supermarkets has long been understood as a means of reaching potential purchasers, specialty produce stores may also prove to be a productive promotional venue, especially in some markets such as Chicago where nearly 20 percent of respondents usually buy sweet corn.
- Only seven percent of all sweet corn buyers had ever received any information about the availability, nutritional qualities or cooking methods for sweet corn. The four most common informational sources included cookbooks, magazine articles, word of mouth recommendations, and newspaper articles.
- About 37 percent of all sweet corn purchase said they had seen newspaper feature stories and newspaper food advertisements for sweet corn within the past year. Approximately 30 percent recalled seeing store posters and television features such as cooking shows.
- Magazine ads and magazine feature stories on sweet corn had been seen by 22 and 15 percent, respectively.
- The Internet was mentioned by relatively few sweet corn buyers as an information source. However, it should not be overlooked as a viable nationwide educational and promotional tool for sweet corn. Nearly three-fourths of all survey respondents had access to the Internet at either work or home. Access by race/ethnicity was found to be about 60 percent for Black non-Hispanics, 72 percent for Hispanics, 80 percent for White non-Hispanics, and 83 percent for Asians. An astounding 94 percent of households with incomes of \$70K or more had Internet access.

At-Home Storage, Preparation and Serving Patterns

- 62 percent consume fresh sweet corn on the day of purchase, and an additional 31 percent consume it within three days. Thus, it appears that prolonged storage in the home is not a pervasive problem that would require extensive consumer education. However, messages that persuade consumers to eat sweet corn as soon after purchase for highest quality could also increase consumption.
- Nearly 7 percent of all sweet corn purchasers store it outside the refrigerator. This percentage ranges from over 9 percent in Dallas and Chicago to about 3 percent in Philadelphia. Un-refrigerated storage undoubtedly takes its toll on quality, and the message to “refrigerate” should be conveyed to consumers.
- 46 percent of all sweet corn purchasers store it shucked. This practice probably results in loss of product quality, and should be discouraged through an educational campaign.
- Boiling is the predominant method for cooking fresh sweet corn (over 70 percent). Other methods of cooking, such as microwaving, are not heavily used. Microwaving could help to position sweet corn as more of a convenience food, perhaps circumventing the complaint that sweet corn is inconvenient and takes too long to prepare.
- There is a variance in cooking methods across cities. Boston and Philadelphia rely heavily upon boiling (over 85%), and respondents in Chicago use the outdoor grill method substantially more than other cities.
- Fresh sweet corn is most often served as a side dish, on the cob.
- Beef and chicken are most frequently consumed with sweet corn. Promotional suggestions for retailers should include the suggestion that sweet corn be cross-merchandised with these popular meats.
- Salad, beans, and potatoes are the most frequently consumed vegetables with sweet corn. The vast variety of vegetable items “typically” served with sweet corn precludes identification of a few specific items that could be cross-merchandised, although beans of all types and salad vegetables that help retailers “break color” could be used.

Conclusions

- In conclusion, we feel that the most important findings of the consumer survey are (1) the very limited consumption in the winter, spring, and fall seasons and (2) consumers' perceptions that sweet corn is not available in these seasons. Thus, with adequate educational and promotional efforts the misperceptions could be overcome. The current market development program has utilized cost effective methods and reached some consumers, but many remain totally unaware of sweet corn during the prime marketing period for Southern Supersweet corn. Many of the largest retailers are aware of Southern Supersweet corn, but significant numbers are not.
- Although growers and shippers may be proud of their southern heritage, feedback from the retail trade indicate that the "Southern" identity may be detrimental. At present Southern Supersweet does not have widespread recognition except at the major retailer level; "Supersweet" by itself conveys product quality and would be simpler to promote.
- The current budget of \$80,000 has had limited overall impact, and vast potential remains to expand the demand for sweet corn in the winter, spring and fall seasons. Based upon results experienced by other commodity groups, a budget of \$500,000 is recommended. This would allow for an expanded consumer educational program using more television feature stories, news releases targeted at newspaper food editors, consumer magazine feature stories, and development and maintenance of a Southern Supersweet Internet website. The consumer must be made aware of the high quality sweet corn that is available in what they perceive to be the "off-seasons". Part of the budget should be directed to creating greater awareness in the retail trade by providing some of the promotional materials that could also serve to get consumers' attention at the store level.

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Introduction

Southern Supersweet Corn Council members represent the majority of sweet corn shipped and consumed in the United States from late fall through the winter until the July Fourth holiday. Major shipments of corn are scheduled to fill orders on the two holidays of Memorial Day and July 4th; historically, retailers have supported the sweet corn industry before and during these time periods with advertisements. Shipments of corn during other times of the year are fairly consistent and affected by weather and retail promotions. The supersweet varieties have more sugar and hold the sugar content for an average of 5 – 10 days under ideal storage conditions of 34° F and 95 percent humidity. Post-harvest practices have been refined, and in combination with the superior variety, sweet corn from the Southern Supersweet producers is of higher quality than local seasonal corn. Recent promotional activities for the past three years have focused on promotion of Southern Supersweet Corn Council products directly to the consumer through a third party communication agency.

In order to better utilize marketing dollars, the Southern Supersweet Corn Council members have contracted with the Florida Agricultural Market Research Center to obtain quantitative and qualitative data from consumers and retailers via survey instruments. A basic overview of the forces within the industry which determine firm conduct is performed and incorporated with survey data. The goal of this research is to assist the sweet corn industry in defining their market position, and to design a competitive market strategy which will utilize inherent advantages to improve firm performance.

Objectives

With the intention of quantifying the impacts of current promotional expenditures and outlining the feasibility of additional promotional activities, the researchers investigated the following three objectives on behalf of the Southern Supersweet Corn Council members:

1. Retail perceptions of sweet corn handling and promotional activities.
2. Consumer perceptions and usage of sweet corn, and sources of information.
3. Recommendations and projected expenditures for future Southern Supersweet Corn Council activities.

Procedures

Prior to questionnaire development, the researchers met with individual sweet corn growers, shippers and handlers located in the Belle Glade production area in an effort to clarify project objectives. Notes from these meetings, combined with informal survey results collected from members of the Southern Supersweet Corn Council, were incorporated into the questionnaire design for both the retail and the consumer survey instruments.

Retailer interviews sought chain store executives' perceptions and knowledge of the profitability of sweet corn varieties in general and Southern Supersweet in particular. Information on chains' handling practices, primarily packaging, shipping and storage of sweet corn was obtained. Details concerning merchandisers' preferences for point-of-sale advertising materials and other promotional activities were recorded. Additionally, interviewees were queried as to desired product attributes, packaging formats, and preferred advertising strategies specific to fresh sweet corn.

Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution, and the supplemental 68th Annual Report of the Grocery Industry, were utilized to develop an approved list of high-level retailer contacts. Produce merchandisers or head buyers of the 55 leading retailers serving the geographic regions east of the Mississippi River and the Dallas/Houston market areas of Texas were contacted initially by mail to legitimize the survey. The Florida Survey Research Center (FSRC), working in partnership with the Florida Agricultural Market Research Center (FAMRC), conducted the interviews, employing a professional researcher with extensive experience in completing questionnaires of both high-level executives and physicians. The interviewer was thoroughly briefed on each item of the retailer questionnaire and project objectives by the principle investigators.

Calls began August 30, 2001, approximately 3-5 days after the initial mailing of the introductory letters, and final contact attempts were accomplished October 29, 2001. A minimum of ten attempts were made to complete each survey, at which time permission was requested to either mail or fax the instrument. Follow-up calls were made on faxes and mailings to confirm receipt of the survey and to respond to any potential questions.

Consumer surveys were conducted in five major market areas to allow for regional dispersion, and include Dallas, Atlanta, Chicago, Boston and Philadelphia. Clustering the consumer interviews facilitated statistical analyses used to determine differences in consumer purchasing, storing and preparation methods. In addition to geographical dispersion, these areas provided racial and ethnic diversity in the total sample.

Primary food shoppers in each of 200 households in each city were interviewed by trained, professional interviewers whom had received precise written and verbal instructions to facilitate full understanding of the consumer questionnaire. The consumer instrument was designed in conjunction with professionals in both the FSCR and the FAMRC, and was approved by a SSCC member prior to the interview process. The University of Florida's Institutional Review Board's Committee for the Protection of the Human Subjects also approved the material prior to initial interviews. The questionnaire was pre-tested to further certify functionality and remove any ambiguity prior to full-scale field interviewing. Telephone numbers were generated using a random digit dialing (RDD) technique. This method avoids difficulties with unlisted and disconnected numbers.

Consumer surveying began in early September and was completed in early November, 2001. Each household was contacted during different times of the day, a minimum of six times each, before an alternative phone number was selected. This generates the greatest assurance of avoiding sampling bias caused by over-sampling non-working food shoppers. Interviewing was accomplished with the assistance of computer workstations (computer-assisted telephone interviewing, also referred to as CATI) to allow for immediate, computerized recording of responses. Quality control of the interviewing procedures was assured by random monitoring of real-time interviews, and through call-back verification of ten percent of all completed questionnaires.

Findings

The Retailer Survey

Executives of 39 of the top fifty-five supermarket chains were successfully interviewed, and seventeen of the top twenty firms provided data. In total, the 39 cooperating firms had combined sales of nearly \$222 billion in 1999 and represented 15,753 store locations in the designated study region. These 39 firms accounted for 82% of the total sales of the 55 chains operating in the study region, i.e. east of the Mississippi River and Texas. Senior executives responsible for buying and merchandising produce were interviewed, and interviewees had an average 27 years' experience, with a mean of fifteen years exclusively in the produce arena.

The following review is organized into five major topic areas:

1. Retailers' evaluations of the basic product (fresh sweet corn).
2. Retailers' evaluations of shipping containers.
3. Retailers' in-store merchandising and promotion practices.
4. Factors affecting fresh sweet corn advertising.
5. Effectiveness of the Southern Supersweet identity.

Data from interviews were analyzed by firm size categories. "Very Large" firms were those with total 1999 sales in excess of \$10 billion, "Large" firms had sales of approximately \$2.273 to \$7.197 billion, "Medium" firms had sales of \$1.0 to \$2.268 billion, and "Small" firms had sales of \$387 million to just under \$1.0 billion (Table 1).

Table 1. Supermarket Chain Size Classification.

Size Classification	Firms	Reported # of Stores	Total Sales (billions \$)	Sales Range 1999 ^a (billions \$)
Very Large	7	9,916	159	>10.000
Large	8	1,207	33	2.273 – 7.197
Medium	14	3,873	23	1.000 – 2.268
Small	10	757	7	0.387 – 0.949
All Firms	39	15,753	222	0.387 – 43.082

^a Sales estimates are from Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

Evaluation of the Basic Product

This first section deals with the buying and merchandising practices for fresh sweet corn of each retailer surveyed, specifically during the late September to early July marketing period, when Florida and Georgia producers are the major product suppliers. The majority of very large firms had no particular preference on fresh sweet corn color, while the remaining 29 percent selected white, accounting for \$46 billion in 1999 sales. An interesting commonality among large, medium and small firms is the strong preference for bicolor in each size category, representing nearly \$26 billion in store sales (Table 2.) In both cases, respondents' claim color preferences are determined by customer demands for higher quality, sweeter and tastier sweet corn (Table 3).

Table 2. Produce Buyers' Preferred Colors of Sweet Corn by Firm Size.

Firm Size	Preferred Color									
	No Preference		White		Yellow		Bi-Color		Totals	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	5 ^a	71	2	29	0	0	0	0	7	100
Large	2	25	1	12	1	12	4	50 ^a	8	100
Medium	4	29	2	14	2	14	7	50 ^a	14	100
Small	2	20	2	20	2	20	4	40 ^a	10	100
All Firms	12	31	7	18	5	13	15	38	39	100

^a Five of the very large firms, representing \$113 billion on sales, expressed no color preference. Two very large firms, with combined sales of \$46 billion, preferred white. A total of 15 chains in the large, medium and small categories, with total sales of \$26 billion, preferred bicolor.

Table 3. Respondents' Reasons for Sweet Corn Color Preference, Comments by Firm Size.

Size of Firms, Color Preference.	Comments ^a
<u>Very Large</u>	<i>White color preference:</i> customer demand; customer preference
<u>Large</u>	<i>White color preference:</i> sweeter <i>Yellow color preference:</i> tastier; white more expensive; customers prefer it <i>Bi-color preference:</i> customers prefer it; have been using bi-color for two years; consistent quality; preferred in the north east
<u>Medium</u>	<i>White color preference:</i> customer preference; better quality/size; holds sweetness longer <i>Yellow color preference:</i> don't know <i>Bi-Color Preference:</i> popular with customers(4); flavor and sweetness; flavor
<u>Small</u>	<i>White color preference:</i> customer preference <i>Yellow color preference:</i> consumer preference(2) <i>Bi-color preference:</i> perception as a better eating corn; customer preference (2); tastes better(2)

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Over the next five years, overall projected sales of white corn are likely to remain fairly consistent (Table 4), while yellow is likely to suffer a sizable decline in sales, with decreases ranging from a 4.3 percent decrease in very large firms to a 23 percent drop in small firms (Table 5). Bicolor sales are projected to capture virtually all sales lost by the yellow varieties, with an average 8.4 percent gain across firm size categories projected by the 2005-06 season (Table 6).

Table 4. Current and Projected White Sweet Corn Sales, by Firm Size.

Firm Size	Estimated Sales			
	2000-01	2001-02	2005-06	
	(-----Percent ^a -----)			
Very Large	43.8	42.5	40.0	Δ- 3.8
Large	12.1	13.2	19.7	Δ+ 7.6
Medium	18.8	20.3	16.6	Δ- 2.2
Small	18.0	19.4	21.0	Δ+ 3.0
All Firms	36.4	35.8	35.1	Δ- 1.3

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

Table 5. Current and Projected Yellow Sweet Corn Sales, by Firm Size.

Firm Size	Estimated Sales			
	2000-01	2001-02	2005-06	
	(-----Percent ^a -----)			
Very Large	41.7	38.8	37.3	Δ- 4.3
Large	33.9	28.3	16.9	Δ- 17.0
Medium	48.5	46.0	43.2	Δ- 5.3
Small	61.4	54.8	38.5	Δ- 22.9
All Firms	41.9	38.5	34.8	Δ- 7.1

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

Table 6. Current and Projected Bicolor Sweet Corn Sales, by Firm Size.

Firm Size	Estimated Sales			
	2000-01	2001-02	2005-06	
	(-----Percent ^a -----)			
Very Large	13.9	17.4	22.3	Δ+ 8.3
Large	54.1	58.5	63.4	Δ+ 9.3
Medium	32.7	33.6	40.2	Δ+ 7.5
Small	20.6	25.8	40.6	Δ+20.0
All Firms	21.7	25.1	30.1	Δ+ 8.4

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

Overall, forty-one percent of respondents' queried about variety preferences mentioned the "Southern Supersweet" variety (Table 7). This includes six out of the seven very large firms with \$135.5 billion in sales, and half (4 out of 8) of the large firms,

representing another \$26.7 billion. This is especially encouraging when given the fact this question was an unaided recall question. Thus, it appears that there is a high level of awareness of the variety name, Southern Supersweet, among the top twenty firms in the industry.

Table 7. Produce Buyers’ Preferences for Specific “Varieties” of Sweet Corn, by Firm Size.

Preference for Specific Variety	Firm Size									
	Small		Medium		Large		Very Large		All Firms	
	(N) ^a	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
No Preference	5	50	8	57	1	12	2	29	16	41
“Silver Queen”	0	0	0	0	1	12	0	0	1	3
“Southern Supersweet”	4	40	2	14	4 ^c	50	6 ^c	86	16	41
“Kandy Korn”	1	10	0	0	0	0	0	0	1	3
“Honey Sweet”	0	0	0	0	1	12	0	0	1	3
“Staysweet”	0	0	1	7	0	0	0	0	1	3
“Double Sweet”	0	0	0	0	1	12	0	0	1	3
“West Coast CA Supersweet”	0	0	0	0	1	12	0	0	1	3
“Silver and Gold”	0	0	0	0	1	12	0	0	1	3
“Sweet Sue”	1	0	0	0	0	0	0	0	1	3
“Sugar enhanced varieties”	0	0	1	7	0	0	0	0	1	3

^a All percentages are based upon the numbers of firms within the respective categories, i.e. there were 10 small, 14 medium, 8 large, and 7 very large firms for a total of 39.

^b Varieties mentioned by respondents are verbatim and obtained via unaided recall questioning.

^c Six of the very large firms, representing \$135.5 billion in sales, mentioned Southern Supersweet preference. Four large firms, with combined sales of \$26.7 billion also expressed preference for Southern Supersweet.

All four firm size categories recognized the superior sweetness of the Southern Supersweet variety, and other positive traits mentioned include improved flavor, taste, early availability, quality, lack of starchiness and length of shelf life (Table 8).

Table 8. Respondents' Reasons for Sweet Corn Variety Preference, Comments by Firm Size.

Size of Firm, Variety Preference	Comments ^a
<u>Very Large</u>	<i>Southern Supersweet</i> : flavor(2); quality; always sweet; stable shelf life; stays sweet longer
<u>Large</u>	<i>Silver Queen</i> : name recognized as premium sweet <i>Southern Supersweet</i> : holds sugar longer; taste(2); best overall flavor <i>Double Sweet</i> : high sugar <i>West Coast (CA Supersweet)</i> : sweeter corn, larger
<u>Medium</u>	<i>Southern Supersweet</i> : excellent eating; early; much greater shelf stability; sweeter; keeps well <i>Sugar-Enhanced Varieties</i> : sweeter <i>Staysweet</i> : sweet, tastes better <i>Silver and Gold</i> : highest sugar, best flavor
<u>Small</u>	<i>Southern Supersweet</i> : consumer demand; stays sweet; does not turn to starch; sweetness <i>Kandy Korn</i> : consumer demand <i>Sweet Sue</i> : local preference

^aSemi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

An impressive 41 percent, or 16 of the 39 firms claimed no improvements were necessary to the basic fresh sweet corn product originating from the Florida-Georgia production areas (Table 9). Nearly one-third of the retailers suggested improvements in product quality, specifically improved sweetness, flavor, shelf-life, larger ears, consistent fill and green shucks. Three firms requested improvements in quality of pack issues, such as consistent size of ears and accurate ear count. Supply issues, especially improved dependability in product supply and increased volume, were also highlighted by three

firms. An additional three firms would like to see wire-bound crates eliminated and a smaller, half-size crate offered to retailers. Finally, five percent of firms discussed the need for increased promotional efforts originating from the Southern Supersweet Corn Council.

Table 9. Produce Buyers' Suggested Changes for the Basic Product (the Corn Itself), by Firm Size.

Firm Size, Suggestions	Number (N)	Percent (%)
Very Large		
None	4	57
Increase white corn supply	1	14
Continue improvement in flavor, sweetness	1	14
Promote bi-color ^a	1	14
Large		
None	2	25
Get out of wirebound crates ^a	1	12
Hold sugar longer	2	25
Increase barrel size, bigger ears	2	25
Avoid skips in supply	1	12
Enhance sweetness	2	25
Strict cooling practices	1	12
Medium		
None	5	36
Reduce cost	1	12
Get away from wooden crates	1	12
Use smaller packages(i.e. ½ crate)	1	12
Have consistent size, number of ears in crate	1	12
Have consistent fill, less crooked lines	1	12

Continued.

Table 9. Continued.

Firm Size, Suggestions	Number	Percent
Medium continued.	(N)	(%)
Grow varieties with green shuck	1	12
Grow varieties with larger ears	1	12
Strive for highest sugar, best flavor	1	12
Do more consumer ^a marketing in consumer magazines	1	12
Small		
None	5	50
Uniform pack count	1	10
Consistent quality, have it pre-packed	1	10
Stable supplies	1	10
All Firms (Summary)		
None	16	41
Product quality issues, e.g., improved sweetness, flavor, shelf-life, bigger ears, consistent fill, green shuck	12	31
Quality of pack, i.e., consistent size, count	3	8
Supply issues – more volume, dependable supplies	3	8
Container issues, i.e., ^a eliminate wirebound, offer smaller ½ crate.	3	8
Promotion issues, i.e., ^a increase promotion	2	5

^a These suggestions obviously do not deal with the product itself, but they are left in because this question was one of the first to afford an opportunity for buyers to offer suggestions for improvement.

Evaluation of Shipping Containers

The following discussion includes summaries of respondents' current and projected usage and requirements for fresh sweet corn packaging, shipping and storage. Virtually all stores, or 97.4 percent, store corn in walk-in coolers (the exception was one small firm that did not know where the corn was stored). The average temperature of storage facilities was 38.3° F, and a range of 34 – 50 degrees was given by all firms. Across firms, only three of the very large and four of the large firms have had first-hand experience with Returnable Plastic Containers (RPCs) (Table 10). These seven firms accounted for combined 1999 sales of over \$89 billion, or 40 percent of total firms' sales. None of the 24 medium or small firms had received sweet corn in RPCs. Almost all had received corn in wire-bound wooden crates, and about three-fourths had received corn in corrugated boxes.

Table 10. Produce Buyers' Experience With Various Types of Sweet Corn Containers, by Firm Size.

Firm Size	Firms Having Experience with					
	RPC's		Wirebound		Corrugated	
	(N)	(%) ^a	(N)	(%)	(N)	(%)
Very Large	3 ^b	43	7	100	5	71
Large	4 ^b	50	8	100	3	38
Medium	0	0	12	86	12	86
Small	0	0	10	100	9	90
All Firms	7	18	37	95	29	74

^a All percentages are based upon the numbers of firms within the respective categories, i.e. there were 10 small, 14, medium, 8 large, and 7 very large firms for a total of 39.

^b Four of the very large firms, representing \$69.3 billion in sales, claimed experience with RPCs. Three large firms, with combined sales of \$19.8 billion, also have received corn in RPCs.

The very large chains anticipate significant increases in usage of RPCs over the next five years, increasing from about 14 percent of total in 2000-01 to nearly 44 percent in the 2005-06 season (Table 11). RPC usage by large firms is projected to increase more

than 55 percent by 2005-06, with very large firms forecasting an additional 29 percent improvement in RPC usage in five years.

Corrugated box usage was projected to increase for all firm size categories except for large firms, 80 percent of which anticipated going to RPCs exclusively (Table 13). Overall usage of corrugated boxes was projected to rise from about 17 percent to 32.5 percent over the next five years.

Increases in RPC and corrugated box usage were projected to come at the expense of wire-bound crates (Table 12). Overall usage of wire-bound crates was projected to decline from about 70 percent to less than 24 percent by the 2005-06 season. In particular, very large, large and medium firms plan to drop wire-bound crate usage by an average of almost 48 percent within the next five years. Medium firms expect to convert all incoming sweet corn containers from wire-bound crates to corrugated boxes, projecting zero usage of RPCs.

Table 11. Current and Projected RPC Usage, by Firm Size.^a

Firm Size	Estimated Returnable Plastic Container Usage		
	2000-01	2001-02	2005-06
	(-----Percent-----)		
Very Large	14.2	18.4	43.6
Large	25.3	48.1	80.9
Medium	0.0	2.6 ^b	0.0
Small	0.0	0.0	6.6
All Firms	13.9	20.3	44.6

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

^b One firm anticipated RPC usage for 2001-02 season, but would not estimate usage for 2005-06. Thus they were not included in data for 2005-06.

Table 12. Current and Projected Wirebound Crate Usage, by Firm Size.

Firm Size	Estimated Wirebound Crate Usage		
	2000-01	2001-02	2005-06
	(-----Percent-----)		
Very Large	66.1	61.8	21.1
Large	73.2	50.2	19.1
Medium	78.9	60.8	34.4
Small	95.5	89.4	75.4
All Firms	69.2	61.0	23.8

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

Table 13. Current and Projected Corrugated Box Usage, by Firm Size.^a

Firm Size	Estimated Corrugated Box Usage		
	2000-01	2001-02	2005-06
	(-----Percent-----)		
Very Large	19.8	19.8	35.4
Large	1.5	1.7	0.0
Medium	21.1	36.5	65.6
Small	4.5	10.6	18.6
All Firms	16.9	18.8	32.5

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

Retailers using the various types of containers were asked to rate the key attributes, such as protection of fresh sweet corn from bruising, ability of crate to allow for immediate cooling, handling ease and safety at the retail level, suitability for display, ease of return or disposal, and overall satisfaction (Table 14). A rating scale of zero to ten was offered to respondents to grade these crate attributes, where zero represents extremely poor and a score of ten indicates excellent performance.

Table 14. Produce Buyers' Ratings of Selected Container Attributes of RPCs, Wirebound Crates, and Corrugated Boxes.

Attribute	Type of Container		
	RPC	Wirebound	Corrugated
	(-----Average ratings ^a -----)		
Protection from bruising	6.9	5.1	7.5
Allows quick cooling	8.2	6.9	5.7
Ease of handling (by retailers)	8.4	4.9	7.1
Suitability for display	7.9	2.4	4.8
Ease of return/disposal	7.0	2.8	5.9
Overall satisfaction	7.3	4.4	6.6

^a Attributes were rated on a zero to 10 scale where zero was defined as “very poor” and 10 was “excellent”.

In general, wire-bound crates received the lowest ratings, achieving an overall satisfaction score of merely 4.4 out of ten. RPCs received the highest ratings on all of the described attributes, with the exception of bruising protection, where corrugated boxes prevailed. Corrugated boxes claimed the second rated preference overall, with an overall score of 6.6; although many handlers found the box easy to handle and relatively safer, it poor score of 4.8 as a suitable display container left it behind the overall higher-ranked RPCs.

Firms using RPCs, while few, generally liked them very much, citing better pre-cooling, easier handling, labor and time efficient, and possessed of preferred display qualities (Table 15). RPC disadvantages include concerns about pack size, potential increased retailer costs, and container size as it relates to display issues (Table 16). Although several very large and large firms indicated RPCs to be worth a “premium”, most said they were not, and almost all refused to indicate a premium value, claiming the benefits gained in terms of cost-savings accrued solely on the sellers' behalf (Table 17).

Table 15. Advantages of Returnable Plastic Containers Cited by Respondents by Firm Size and Response Order.

Size of Firm, ^a Response Order	Comments ^b
Very Large	<p><i>Primary Responses:</i> better pre-cooling; easier handling; time-saver; display better</p> <p><i>Secondary Responses:</i> display better; better cooling</p> <p><i>Tertiary Responses:</i> less product damage</p>
Large	<p><i>Primary responses:</i> lower garbage cost; shrinkage control; great for display; improve quality; cost for disposal is probably less than for wire bound crates</p> <p><i>Secondary responses:</i> better for environment; less damage to the product</p> <p><i>Tertiary responses:</i> labor saving</p>

^a No medium or small chains had first hand experience with RPCs, therefore they were not asked this question.

^b Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Table 16. Disadvantages of Returnable Plastic Containers Cited by Respondents, by Firm Size and Response Order.

Size of Firm, ^a Response Order	Comments ^b
<u>Very Large</u>	<p><i>Primary Responses:</i> 2.5 RPC too deep for display-#2 is better ergonomically; none(2)</p>
<u>Large</u>	<p><i>Primary Responses:</i> inconsistent supplies; pack size is a concern; cost; freshness; none</p> <p><i>Secondary Responses:</i> ice may not drain correctly; handling difficulty(2)</p> <p><i>Tertiary Responses:</i> if they add to product cost, then will not use</p>

^a No medium or small chains had first hand experience with RPCs, therefore they were not asked this question.

^b Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Table 17. RPC Users' Response to the Question "Are RPCs Worth a Premium to the Typical Retail Firm?", by Firm Size.

Firm Size ^a	Are RPCs Worth a Premium?	
	Yes	No
	(-----Number of Firms-----)	
Very Large	1	2
Large	2	2

^a No "Medium" or "Small" chains had first-hand experience with RPCs, therefore they were not asked this question.

While all firms are projecting an average 45 percent decrease in wire-bound crate usage within the next five seasons, several firms mention positive attributes including ease of use, ability to stack and recycle, and good cooling of the corn (Table 18). The generally pervasive dislike of wire-bound crates is due to damage inflicted on the corn, injuries to workers, poor display qualities, and disposal problems (Table 19).

Table 18. Advantages of Wire Bound Crates Cited by Respondents, by Firm Size and Response Order.

Size of Firm, Response Order	Comments ^a
<u>Very Large</u>	<p><i>Primary Responses:</i> none; they keep corn wet; ease of cooling the corn(4); ease of loading on trucks</p> <p><i>Secondary Responses:</i> ease of cooling</p>
<u>Large</u>	<p><i>Primary Responses:</i> none; less cost for shipper; pre-ice allows drainage; keeps cost down; corn can breathe; less shrink than RPCs; ease of cooling</p> <p><i>Secondary Responses:</i> decent for display; visibility</p>
<u>Medium</u>	<p><i>Primary Responses:</i> none(4); shipping and handling ease; getting more corn on truck; easy to hydrate; easier ice drainage; ease of cooling corn(3);</p>
<u>Small</u>	<p><i>Primary Responses:</i> none; ease of use; good cooling(4); best options; easy to handle; cooling and top icing; retail display</p> <p><i>Secondary Responses:</i> stackable(2); good breathing(2); better protection; easy to dispose; also recyclable to farmers</p> <p><i>Tertiary Responses:</i> count, size better</p>

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Table 19. Disadvantages of Wire Bound Crates Cited by Respondents, by Firm Size and Response Order.

Size of Firm, Response Order	Comments ^a
<u>Very Large</u>	<p><i>Primary Responses:</i> bruises product; waste management; danger at stores-wires and splinters cause injuries; safety factors; can't display; handling is hazardous; disposal difficult and costly</p> <p><i>Secondary Responses:</i> hard to stack; difficult cooling; disposal(2); condition of crates-sharp edges, splinters</p> <p><i>Tertiary Responses:</i> cannot display; cost of disposal</p>
<u>Large</u>	<p><i>Primary Responses:</i> old world; high cost of disposal; dirty; unsteady crates can damage corn (2); disposal(2); damage to corn</p> <p><i>Secondary Responses:</i> too much waste; does not display well; hard to open; disposal</p> <p><i>Tertiary Responses:</i> injuries from handling; tears clothes/fingernails</p>
<u>Medium</u>	<p><i>Primary Responses:</i> expense of disposal; many disadvantages; lack of stability; disposal; lack of stacking ability on pallet; lack of protecting product integrity; injuries due to handling(2); damage to product(2); drying of product; handling can be difficult at times</p> <p><i>Secondary Responses:</i> corn is easily damaged; awkward for stacking; handling hazardous; pallets fall; not very protective of corn; difficult to handle; bruising</p> <p><i>Tertiary Responses:</i> difficult to break down; looks unsanitary</p>
<u>Small</u>	<p><i>Primary Responses:</i> none; damage to the corn(5); display negative; injuries from wire; air drying shucks; inconsistent counts of ears packed</p> <p><i>Secondary Responses:</i> injury to handlers; splinters; moisture loss-dry shucks; poor display</p>

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Ease of cooling, hydration, breath-ability and handling benefits are the overwhelming positive attributes for use of corrugated boxes (Table 20). Yet it is these

same preferences that cause the major disadvantages of instability, tendency to collect dirt, and problems with waste management (Table 21).

Table 20. Advantages of Corrugated Boxes Cited by Respondents, by Firm Size and Response Order.

Size of Firm, Response Order	Comments ^a
<u>Very Large</u>	<p><i>Primary Responses:</i> none; less bruising; disposal easier; safer handling; protects product better</p> <p><i>Secondary Responses:</i> better cooling; display advantage</p> <p><i>Tertiary Responses:</i> ease of handling and shipping out to stores with other boxes</p>
<u>Large</u>	<p><i>Primary Responses:</i> ease of display if cardboard is European; second choice after RPCs; eliminates damage to corn; protects product better</p> <p><i>Secondary Responses:</i> efficiency of display because they stack better; holds moisture in better</p>
<u>Medium</u>	<p><i>Primary Responses:</i> protection of product; sturdiness protects corn; easier to use; handling; transports well; stacking; protects integrity of product; may hold and protect corn better; easier to handle and display; product keeps its freshness and moisture; handling ease(2)</p> <p><i>Secondary Responses:</i> lighter for handling; easier disposal; protects the product; looks more sanitary; better for products</p> <p><i>Tertiary Responses:</i> lower injuries; no wires, no icing</p>
<u>Small</u>	<p><i>Primary Responses:</i> easier storage; less damage to product(4); ease of handling; moisture control; displays better</p> <p><i>Secondary Responses:</i> protection of product; easier handling in store(2)</p> <p><i>Tertiary Responses:</i> protection of product</p>

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate number of buyers giving similar responses.

Table 21. Disadvantages of Corrugated Boxes Cited by Respondents, by Firm Size and Response Order.

Firm Size, Response Order	Comments ^a
<u>Very Large</u>	<p><i>Primary Responses:</i> none(2); wax precludes recycling; corn not as fresh; boxes fall apart</p> <p><i>Secondary Responses:</i> cost of freight is higher than wire bound; product is damaged by falling out</p>
<u>Large</u>	<p><i>Primary Responses:</i> waxed, cannot recycle; poor structural integrity; only a problem if waxed; weak cartons can damage corn; less efficient cooling</p>
<u>Medium</u>	<p><i>Primary Responses:</i> none; disposal(2); if wet, they fall apart; leaks water and ice; if box is not correct size it becomes difficult to stack on pallet, i.e. so pallet does not fall; less on truck; fall apart; poor cooling(2); holds more heat; boxes don't hold shape at times</p> <p><i>Secondary Responses:</i> can't recycle</p>
<u>Small</u>	<p><i>Primary Responses:</i> none(2); corn gets soggy if too much ice put into the box; poorer cooling(2); slick-hard to pick up; useless after empty; corn doesn't get to breathe; does not display well</p>

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate number of buyers giving similar responses.

Only one user of RPCs was willing to give a disposal/return cost estimate, and his estimate was 0.10 cents per container. Disposal cost estimates were identical, averaging 0.19 cents per container and ranging from zero to 0.75 cents each (Table 22).

Table 22. Produce Buyers' Disposal/Return Cost Estimates for Various Types of Containers.

Type of Container	Number of Estimates	Range	Average
		(-----Dollars-----)	
RPC	1	N.A.	0.10
Wirebound	7	0.0 – 0.75	0.19
Corrugated	9	0.0 – 0.75	0.19

In summary, respondents were asked for suggested changes to fresh sweet corn shipping containers and packaging, and sixty-nine percent responded with ideas for improvement (Table 23). Reflecting their preference for RPCs, very large and large firms asked for safe, clean, display-friendly crates that benefited the product without incurring any additional costs to retailers. Several also mentioned the need for consistent crate size and pack. Various specific recommendations were noted: some requested a shucked tray of 4-5 ears pre-packed by the shippers representing 5 - 10 percent of shipped volume, others preferred the #2 size over the #2.5 size for display purposes. The preference for corrugated boxes among the small and medium firms was also re-emphasized in the suggestions, as these retailers also desire to move to safer, display-ready boxes.

Table 23. Suggested Changes to Containers and Packaging, Comments by Firm Size and Response Order.

Firm Size, Response Order	Comments ^a
<u>Very Large</u>	<p><i>Primary Responses:</i> ship in RPCs; use slush-iced corrugated containers; safe open crate made of material that won't injure and won't allow product to dry out; none-changing packaging increases consumer cost; use display-friendly packing that cools as well as wire crates; be more consistent in the quantity per crate, or use the equivalent-size crate</p> <p><i>Secondary Responses:</i> prefer #2 over #2.5s</p>
<u>Large</u>	<p><i>Primary Responses:</i> none(2); go to RPCs as soon as possible; use RPCs 100%; receive 100% of FL-GA sweet corn in WBC, and greater than 90% in WBC from all other sweet corn suppliers-suggest not twisting WBC and stacking crates better, using more CHEP pallets to minimize damage; free-packing shucked tray of 4-5 ears, maybe 5-10% of shipped volume; need to have consistent crate size and pack; better protection for corn</p> <p><i>Secondary Responses:</i> RPC units are probably right way to go, however growers seem resistant</p>
<u>Medium</u>	<p><i>Primary Responses:</i> none(4); don't ship in wirebound crates, use waxed boxes with slush ice; use cardboard for packing; stop using wirebound crate; transport iceless in some sort of cardboard; would like to see more corrugated wax box; go with new display-ready corrugated boxes; make sure there are uniform counts in boxes; use more corrugated boxes(2); use stronger material for corrugated boxes</p> <p><i>Secondary Responses:</i> use ½ crate size; use iceless boxes</p> <p><i>Tertiary Responses:</i> put growers name on boxes</p>
<u>Small</u>	<p><i>Primary Responses:</i> none(5); something in between wire-bound and corrugated boxes; lighter packaging; switch to corrugated, wax boxes; uniform size to accommodate same size; better containers for display</p>

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate numbers of buyers giving similar responses.

Retailers' In-store Merchandising and Promotion Practices

This section describes the merchandising practices retailers enforce in their store locations, and includes in-depth responses concerning promotional practices specific to fresh sweet corn throughout the year. When not featured, or on-advertisement, 72 percent of sweet corn is sold bulk unshucked, just over 25 percent is sold partially shucked in tray packs, and only 2 percent is sold completely shucked in tray packs (Table 24). Large firms present the majority of off-ad, bulk, unshucked product, offering more than 86 percent in this form, which is more than twice that of small firms, which carry nearly 39 percent in this non-packaged format. In total, small firms present a unique finding, where nearly 62 percent of all sweet corn sales are tray packed, either partially or completely shucked, when the product is not featured.

Table 24. Packaging Methods for Sweet Corn when Not Featured.

Firm Size	Packaging Method		
	Bulk, Unshucked	Tray Pack, Partially Shucked	Tray Pack, Completely Shucked
	(------Percent ^a -----)		
Very Large			
Weighted average	69.6	27.5	2.9
Range	1 – 90.0	10 – 90.0	0 – 5.0
Large			
Weighted average	86.1	10.6	3.4
Range	50 – 100.0	0 – 50.0	0 – 10.0
Medium			
Weighted average	73.1	24.6	2.3
Range	0 – 100.0	0 – 100.0	0 – 20.0
Small			
Weighted average	38.6	42.5	19.0
Range	0 – 90.0	0 – 95.0	0 – 90.0
All Firms			
Weighted average	72.3	25.3	2.4
Range	0 – 100.0	0 – 100.0	0 – 90.0

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

When featured on-ad, on average across firms, over 90 percent is sold bulk, unshucked, less than eight percent is sold partially shucked in tray packs, and only one percent is completely shucked in tray packs (Table 25). Interestingly, medium and small firms still offer 19.3 and 17.9 percent, respectively, tray packed and either partially or completely shucked when sweet corn is on-ad.

Table 25. Packaging Methods for Sweet Corn when Featured.

Firm Size	Packaging Method		
	Bulk, Unshucked	Tray Pack, Partially Shucked	Tray Pack, Completely Shucked
	(-----Percent ^a -----)		
Very Large			
Weighted average	91.0	7.0	0.8
Range	70 – 95.0	2 – 30.0	0 – 5.0
Large			
Weighted average	96.1	1.7	2.3
Range	90 – 100.0	0 – 10.0	0 – 10.0
Medium			
Weighted average	80.7	17.2	2.1
Range	20 – 100.0	0 – 100.0	0 – 20.0
Small			
Weighted average	82.1	15.1	2.8
Range	50 – 100.0	0 – 50.0	0 – 10.0
All Firms			
Weighted average	91.3	7.6	1.2
Range	20 – 100.0	0 – 100.0	0 – 20.0

^a All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

When not featured on ad, 95 percent of all firms use refrigerated displays (Table 26). However, when sweet corn is featured or advertised, over two-thirds (86 percent of very large firms) use unrefrigerated displays (Table 27). Thus, there may be some product deterioration during advertised periods, especially in stores with relatively low sales volume.

Table 26. Type of Displays Used for Sweet Corn When Not Featured, by Firm Size.

Firm Size	Type of Display					
	Refrigerated and mist		Refrigerated only		Unrefrigerated	
	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	4	57	3	43	0	0
Large	5	71	2	29	0	0
Medium	8	57	4	29	2	14
Small	5	56	4	44	0	0
All Firms	22	59	13	35	2	5

^a All percentages are based upon the number of firms responding in each category. There were responses from 7 very large, 7 large, 13 medium, and 10 small firms for a total of 37. One respondent from a small firm did not know what type of display was used for non-featured periods. Totals may not sum to 100.0 due to rounding.

Table 27. Type of Displays Used for Sweet Corn When Featured, by Firm Size.

Firm Size	Type of Display					
	Refrigerated and mist		Refrigerated only		Unrefrigerated	
	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	0	0	1	14	6	86
Large	2	29	2	29	3	43
Medium	0	0	3	23	10	77
Small	1	10	3	30	6	60
All Firms	3	8	9	24	25	68

^a All percentages are based upon the number of firms responding in each category. There were responses from 7 very large, 7 large, 13 medium, and 10 small firms for a total of 37. One medium-sized firm never features sweet corn. Totals may not sum to 100.0 due to rounding.

When not featured or advertised, few firms sell sweet corn directly out of the shipping containers, regardless of container type (Table 28). Less than five percent of total sweet corn volume is sold in this manner. However, when corn is featured on-ad, nearly one-third of total volume is sold directly out of the containers. The largest differences appear in the very large and large firm categories, where increases of 23 and 53 percent, respectively, occur in total volumes of sweet corn sold out of containers while featured. Thus, container display qualities are very important during high sales volume periods.

Table 28. Percentage of Sweet Corn Sold Directly Out of Shipping Crates or Containers, by Firm Size.

Firm Size	Percentages Sold Directly Out of Shipping Containers	
	When Not Featured	When Featured
	(-----Percent ^a -----)	
Very Large		
Weighted average ^b	5.4	28.2
Simple average	2.9	28.6
Range	0 – 20.0	0 – 60.0
Large		
Weighted average ^b	3.6	61.8
Simple average	3.6	55.7
Range	0 – 10.0	0 – 100.0
Medium		
Weighted average ^b	0.6	9.9
Simple average	0.7	11.9
Range	0 – 10.0	0 – 75.0
Small		
Weighted average ^b	2.1	13.9
Simple average	2.0	15.0
Range	0 – 10.0	0 – 60.0
All Firms		
Weighted average ^b	4.6	31.0
Simple average	2.0	24.2
Range	0 – 20.0	0 – 100.0

^a All percentages are based upon the number of firms responding in each category. There were responses from 7 very large, 7 large, 14 medium, and 10 small firms, for a total of 38 firms.

^b All percentages are weighted by responding firms' 1999 sales as reported in Progressive Grocer's 2001 Marketing Guidebook: The Blue Book of Grocery Distribution.

A wide variety of produce items are typically merchandised alongside sweet corn in most stores. Green beans, potatoes, “greens”, “cooking vegetables”, “hard” vegetables such as broccoli and carrots and many others were mentioned, regardless of advertisement status of fresh sweet corn or firm size category (Tables 29 and 30). Many of the items mentioned require far more cooking time relative to fresh sweet corn. Future positioning of sweet corn with items considered “quick-cooking” or convenience dishes may be advantageous.

Table 29. Produce Items Displayed Adjacent to Sweet Corn when Not Featuring Sweet Corn, by Firm Size.

Firm Size	Comments ^a
<u>Very Large</u>	Green beans(3); other wet rack items; various vegetables(3); squash; potatoes; red potatoes
<u>Large</u>	Beans; different in each store-use European look, table with cauliflower, artichoke, tomatoes in summer; cooking vegetables(3); vegetable items; leaf lettuce; varies by season; asparagus; cauliflower
<u>Medium</u>	Green beans(3); various garden vegetables; other vegetables(2); none[free standing display]; cooking vegetables; red potatoes; tomatoes(3); cooking greens; carrots; new potatoes; peppers; baking potatoes(2); potatoes(2); roots; hard vegetables, i.e. broccoli and carrots; mushrooms
<u>Small</u>	Other cooking vegetables(4); green beans; between greens; hard vegetables; squash; mini carrots; various vegetables; broccoli crowns

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate number of buyers giving similar responses.

Table 30. Produce Items Displayed Adjacent to Sweet Corn when Featuring Sweet Corn by Firm Size.

Firm Size	Comments ^a
<u>Very Large</u>	Green beans(2); seasonal items; squash; potatoes
<u>Large</u>	By itself(2); cooking vegetables; potatoes
<u>Medium</u>	Green beans(3); garden vegetables(2); baking potatoes(2); tray packs; new potatoes(2); tomatoes(4); carrots; various vegetables; peppers; onions; potatoes(2); mushrooms; none(2)
<u>Small</u>	Melons; carrots; vidalia onions; other cooking vegetables; by itself; baking potatoes; peppers; cantaloupes; onions(3)

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate number of buyers giving similar responses.

Non-produce product tie-ins were fairly predictable: heavy on butter, squeeze butter/margarine, salt, corn skewers, spices, and grilling items (Table 31). Some of these items may afford an opportunity for cooperative promotional activities.

Table 31. Non-Produce Tie-ins Successfully Sold with Sweet Corn, by Firm Size.

Size of Firm	Comments ^a
<u>Very Large</u>	Butter; corn skewers (4); squeeze margarine; squeeze butter (3); salt; kettles
<u>Large</u>	Corn boils; skewers; prongs; sweet butter; butter (2); spices (2); salt (2); grilling items; foil or foil pouches
<u>Medium</u>	Parkay; corn skewers (4); corn soakers; grilling equipment; meat; butter (4); salt (4); crawfish; squeeze butter; charcoal; roasting pots; squeeze margarine
<u>Small</u>	Corn skewers (5); butter(4); margarine; grills; roasting kits; salt (2)

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Survey respondents were queried as to their past usage of several specific point-of-sale materials. For each activity used, retailers were asked to subjectively describe whether it was very effective, somewhat effective, or not effective in promoting fresh sweet corn for their stores (the results are listed in Tables 32, 34, 36, 38, 40, 42, 44 and 46). In particular, price cards, recipes, and nutritional brochures were some of the most widely used materials. Radio and television spots were also used by about 40 – 50 percent of all firms. However, price cards provided by outside marketing coalitions have limited appeal, as some firms have unique size and style requirements. For in-depth analyses of the number of firms claiming promotional activities to be very or somewhat effective, actual total numbers of stores and sales are provided in Tables 33, 35, 37, 39, 41, 43 and 45.

Table 32. Past Use and Ratings of In-Store Demonstrations/Sampling for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	1	- ^a	1	-	0	-	5	-
Large	1	-	3	-	0	-	3	-
Medium	0	-	1	-	0	-	13	-
Small	1	-	1	-	0	-	8	-
All Firms	3	8	6	16	0	0	29	76

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 33. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of In-Store Demonstration/Sampling "Very Effective" or "Somewhat Effective", by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	2	2716	51.9
Large	4	883	24.4
Medium	1	125	1.6
Small	2	263	1.0
All Firms	9	3987	78.9

Table 34. Past Use and Ratings of In-Store Videotapes for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	1	- ^a	0	-	1	-	5	-
Large	0	-	0	-	1	-	6	-
Medium	0	-	0	-	0	-	14	-
Small	0	-	0	-	0	-	10	-
All Firms	1	3	1	3	0	0	29	76

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 35. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of In-Store Videotapes “Very Effective” or “Somewhat Effective”, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	1	1016	16.0
Large	0	0	0
Medium	0	0	0
Small	0	0	0
All Firms	1	1016	1600

Table 36. Past Use and Ratings of In-Store Radio Spots for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/ Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	0	- ^a	3	-	3	-	1	-
Large	1	-	3	-	1	-	2	-
Medium	3	-	5	-	0	-	6	-
Small	1	-	1	-	0	-	8	-
All Firms	7	18	10	26	1	3	21	55

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of “All Firms” may not sum to 100 due to rounding.

Table 37. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of Radio Spots “Very Effective” or “Somewhat Effective”, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	3	3630	62.2
Large	4	847	24.1
Medium	8	3183	13.9
Small	2	72	1.5
All Firms	17	7732	101.7

Table 38. Past Use and Ratings of TV Spots for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/ Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	2	- ^a	1	-	0	-	4	-
Large	4	-	0	-	1	-	2	-
Medium	0	-	1	-	0	-	13	-
Small	1	-	1	-	0	-	8	-
All Firms	12	32	2	5	1	3	23	61

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 39. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of TV Spots "Very Effective" or "Somewhat Effective", by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	3	4780	89.1
Large	4	550	12.5
Medium	5	2633	6.9
Small	2	72	1.5
All Firms	14	8335	113.0

Table 40. Past Use and Ratings of Banners/Large Posters for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/ Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	1	- ^a	2	-	0	-	4	-
Large	3	-	0	-	1	-	3	-
Medium	4	-	2	-	0	-	8	-
Small	1	-	3	-	0	-	6	-
All Firms	9	24	7	18	1	3	21	55

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 41. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of Banners/Large Posters “Very Effective” or “Somewhat Effective”, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	3	4670	92.1
Large	3	637	18.2
Medium	6	2657	9.1
Small	4	216	2.7
All Firms	16	8480	122.0

Table 42. Past Use and Ratings of Small Format Price/Case Cards for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/ Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	2	- ^a	2	-	0	-	3	-
Large	1	-	2	-	2	-	2	-
Medium	4	-	3	-	0	-	7	-
Small	2	-	2	-	0	-	6	-
All Firms	9	24	9	24	2	5	18	47

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of “All Firms” may not sum to 100 due to rounding.

Table 43. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of Price/Case Cards “Very Effective” or “Somewhat Effective”, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	4	6166	111.1
Large	3	886	19.5
Medium	7	2764	10.5
Small	4	495	3.3
All Firms	18	10611	144.5

Table 44. Past Use and Ratings of Recipe Cards for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/ Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	1	- ^a	1	-	2	-	3	-
Large	1	-	3	-	2	-	1	-
Medium	1	-	4	-	2	-	7	-
Small	0	-	3	-	1	-	6	-
All Firms	3	8	11	29	7	18	17	45

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of “All Firms” may not sum to 100 due to rounding.

Table 45. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of Recipe Cards “Very Effective” or “Somewhat Effective”, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	2	5916	98.5
Large	4	850	19.2
Medium	5	941	9.5
Small	3	199	3.0
All Firms	14	8206	13.02

Table 46. Past Use and Ratings of Nutritional Brochures for Sweet Corn, by Firm Size.

Firm Size	Ratings							
	Very Effective		Somewhat Effective		Not Effective		Did Not Use/ Don't Know	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	1	- ^a	0	-	1	-	5	-
Large	1	-	3	-	1	-	2	-
Medium	1	-	4	-	1	-	8	-
Small	0	-	3	-	2	-	5	-
All Firms	3	8	10	26	5	13	20	53

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of “All Firms” may not sum to 100 due to rounding.

Table 47. Number of Firms, Number of Stores and Associated Total Sales of Respondents Rating Use of Nutritional Brochures “Very Effective” or “Somewhat Effective”, by Firm Size.

Firm Size	Firms (-----Number-----)	Stores	Sales (-----Billions \$-----)
Very Large	1	2716	51.9
Large	4	896	20.8
Medium	5	526	7.3
Small	3	240	3.7
All Firms	13	4378	83.6

Survey respondents were asked what kinds of point-of-sale materials supplied by the sweet corn industry would likely be used. For each activity mentioned, retailers were asked to subjectively describe whether their firms were very likely, somewhat likely, or not at all likely in promoting fresh sweet corn for their stores (the results are listed in Tables 48, 50, 52, 54, 56, 58, 60, 62, 64, 66 and 68). Recipe cards were the most popular, with interest expressed by 28 of the 39 firms, which represents over 12,000 stores and \$175 billion in sales. Electronic ad slicks were the second most popular item, likely to be used by 27 firms, which represent about 10, 600 stores and \$161.7 billion in total sales. Hard copy ad slicks were next in popularity, appealing to 24 firms with over 9,000 stores and sales of \$117 billion. For in-depth analyses of the number of firms claiming promotional activities to be very or somewhat effective, actual total numbers of stores and sales are provided in Tables 49, 51, 53, 55, 57, 59, 61, 63, 65, 67 and 69.

Table 48. Retailers' Likelihood of Using In-Store Videotapes, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	2	- ^a	2	-	2	-	1	-
Large	7	0	-	1	-	6	-	0	-
Medium	14	2	-	2	-	10	-	0	-
Small	10	2	-	2	-	5	-	1	-
All Firms	38	6	16	7	18	23	61	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 49. Number of Firms, Number of Stores and Associated Total Sales of Respondents "Very Likely" or "Somewhat Likely" to Use In-Store Videotapes, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	4	3616	53.4
Large	1	200	4.3
Medium	4	2139	6.0
Small	4	186	2.7
All Firms	13	6141	66.3

Table 50. Retailers' Likelihood of Using Ad Slicks (hard copy), if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	2	- ^a	2	-	2	-	1	-
Large	7	1	-	4	-	2	-	0	-
Medium	14	3	-	5	-	6	-	0	-
Small	10	4	-	3	-	2	-	1	-
All Firms	38	10	26	14	37	12	32	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 51. Number of Firms, Number of Stores and Associated Total Sales of Respondents “Very Likely” or “Somewhat Likely” to Use Ad Slicks (hard copy), by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	4	5200	82.6
Large	5	886	19.5
Medium	8	2900	13.0
Small	7	389	4.7
All Firms	24	9375	119.7

Table 52. Retailers’ Likelihood of Using Ad Slicks (electronic copy), if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don’t Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	4	- ^a	1	-	1	-	1	-
Large	7	2	-	4	-	1	-	0	-
Medium	14	5	-	3	-	6	-	0	-
Small	10	4	-	4	-	1	-	1	-
All Firms	38	15	39	12	32	9	24	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of “All Firms” may not sum to 100 due to rounding.

Table 53. Number of Firms, Number of Stores and Associated Total Sales of Respondents “Very Likely” or “Somewhat Likely” to Use Ad Slicks (electronic copy), by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	5	6900	118.4
Large	6	1023	26.7
Medium	8	2583	12.8
Small	8	432	5.2
All Firms	27	10938	163.1

Table 54. Retailers' Likelihood of Using Radio Scripts, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	1	- ^a	2	-	3	-	1	-
Large	7	1	-	4	-	2	-	0	-
Medium	14	1	-	5	-	8	-	0	-
Small	10	1	-	3	-	4	-	1	-
All Firms	38	4	11	14	38	17	46	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 55. Number of Firms, Number of Stores and Associated Total Sales of Respondents "Very Likely" or "Somewhat Likely" to Use Radio Scripts, by Firm Size.

Firm Size	Firms		Stores	Sales
	(-----Number-----)		(-----Billions \$-----)	
Very Large	3		4530	69.5
Large	5		850	19.2
Medium	6		2623	9.0
Small	4		405	2.4
All Firms	18		8108	100.1

Table 56. Retailers' Likelihood of Using TV Scripts, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	1	- ^a	2	-	3	-	1	-
Large	7	2	-	2	-	3	-	0	-
Medium	14	2	-	2	-	10	-	0	-
Small	10	1	-	1	-	6	-	1	-
All Firms	38	6	16	7	19	22	59	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 57. Number of Firms, Number of Stores and Associated Total Sales of Respondents “Very Likely” or “Somewhat Likely” to Use TV Scripts, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	3	4050	66.4
Large	4	596	14.1
Medium	4	2123	5.7
Small	2	55	1.0
All Firms	13	6824	87.2

Table 58. Retailers’ Likelihood of Using Banners/ Posters, if Provided by the Sweet Corn Industry, by Firm Size. ^b

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don’t Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	0	- ^a	2	-	4	-	1	-
Large	7	2	-	4	-	1	-	0	-
Medium	14	4	-	5	-	5	-	0	-
Small	10	4	-	4	-	1	-	1	-
All Firms	38	10	26	15	39	11	29	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of “All Firms” may not sum to 100 due to rounding.

^b “Banners/posters” were defined as 2’ x 3’ or larger.

Table 59. Number of Firms, Number of Stores and Associated Total Sales of Respondents “Very Likely” or “Somewhat Likely” to Use Banners/ Posters, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	2	2370	49.0
Large	6	1023	26.7
Medium	9	2970	14.8
Small	8	641	5.2
All Firms	25	7004	95.7

Table 60. Retailers' Likelihood of Using Price Cards, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	1	- ^a	1	-	4	-	1	-
Large	7	0	-	2	-	5	-	0	-
Medium	14	3	-	0	-	11	-	0	-
Small	10	5	-	2	-	2	-	1	-
All Firms	38	9	24	5	13	22	58	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 61. Number of Firms, Number of Stores and Associated Total Sales of Respondents "Very Likely" or "Somewhat Likely" to Use Price Cards, by Firm Size.

Firm Size	Firms		Stores	Sales
	(-----Number-----)			(-----Billions \$-----)
Very Large	2		3616	59.1
Large	2		246	6.2
Medium	3		2137	5.1
Small	7		541	4.5
All Firms	14		6540	74.9

Table 62. Retailers' Likelihood of Using Case Cards, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	1	- ^a	1	-	4	-	1	-
Large	7	1	-	1	-	5	-	0	-
Medium	14	2	-	1	-	11	-	0	-
Small	10	4	-	2	-	2	-	1	-
All Firms	38	8	22	5	14	22	59	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 63. Number of Firms, Number of Stores and Associated Total Sales of Respondents “Very Likely” or “Somewhat Likely” to Use Case Cards, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	2	3616	59.1
Large	2	336	7.5
Medium	3	2137	5.1
Small	6	509	3.8
All Firms	13	6598	75.5

Table 64. Retailers’ Likelihood of Using Recipe Cards, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don’t Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	3	- ^a	3	-	0	-	1	-
Large	7	2	-	4	-	1	-	0	-
Medium	14	4	-	6	-	4	-	0	-
Small	10	3	-	3	-	3	-	1	-
All Firms	38	12	32	16	42	8	21	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of “All Firms” may not sum to 100 due to rounding.

Table 65. Number of Firms, Number of Stores and Associated Total Sales of Respondents “Very Likely” or “Somewhat Likely” to Use Recipe Cards, by Firm Size.

Firm Size	Firms	Stores	Sales
	(-----Number-----)		(-----Billions \$-----)
Very Large	6	7916	134.4
Large	6	1036	23.1
Medium	10	3140	16.0
Small	6	241	3.4
All Firms	28	12333	176.9

Table 66. Retailers' Likelihood of Using Display Contests, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	1	- ^a	1	-	4	-	1	-
Large	7	3	-	2	-	2	-	0	-
Medium	14	3	-	4	-	7	-	0	-
Small	10	3	-	3	-	2	-	1	-
All Firms	38	10	27	10	27	15	41	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 67. Number of Firms, Number of Stores and Associated Total Sales of Respondents "Very Likely" or "Somewhat Likely" to Use Display Contests, by Firm Size.

Firm Size	Firms		Stores	Sales
	(-----Number-----)			(-----Billions \$-----)
Very Large	2		1450	23.3
Large	5		736	16.4
Medium	7		2937	10.0
Small	6		449	3.7
All Firms	20		5572	53.3

Table 68. Retailers' Likelihood of Using Nutritional Brochures, if Provided by the Sweet Corn Industry, by Firm Size.

Firm Size	N	Likelihood of Use							
		Very Likely		Somewhat Likely		Not at all likely		Don't Know	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	3	- ^a	2	-	1	-	1	-
Large	7	1	-	5	-	1	-	0	-
Medium	14	3	-	6	-	5	-	0	-
Small	10	3	-	5	-	1	-	1	-
All Firms	38	10	26	18	47	8	21	2	5

^a Percentages were not calculated for responses within individual firm size categories because of small numbers of observations. Percentages of "All Firms" may not sum to 100 due to rounding.

Table 69. Number of Firms, Number of Stores and Associated Total Sales of Respondents “Very Likely” or “Somewhat Likely” to Use Nutritional Brochures, by Firm Size.

Firm Size	Firms (-----Number-----)	Stores	Sales (-----Billions \$-----)
Very Large	5	5316	91.3
Large	6	1036	23.1
Medium	9	2975	14.0
Small	8	522	4.9
All Firms	28	9849	133.3

In summary, direct comparisons between retailers’ past usage and ratings (Table 70) and likelihood of usage data should the promotional activity be sponsored by the sweet corn industry (Table 71) are made available and ranked according to total sales estimates to allow for budgetary sensitivity analyses.

Table 70. In-store Promotional Materials Rated as Very or Somewhat Effective.

Promotional Materials	Very/Somewhat Effective (-----Number-----)	Stores	Total Sales (in billions \$) (----billions\$----)
Price Cards/ Case Cards	18	10611	144.5
Radio Scripts	17	7732	101.7
Banners/ Posters	16	8480	122.0
TV Scripts	14	8335	113.0
Recipe Cards	14	8206	130.2
Nutritional Brochures	13	4378	83.6
In-store Demonstration/ Sampling	9	3987	78.9
In-Store Videotapes	1	1016	16.0

Table 71. Promotional Materials Likely to be Used by Retailers.

Promotional Materials	Very/Somewhat Likely	Number of Stores	Total Sales (in billions \$)
	(-----Number-----)		(----billions\$----)
Recipe Cards	28	12333	176.9
Electronic Ad Slicks	27	10938	163.1
Nutritional Brochures	28	9849	133.3
Hard Copy Ad Slicks	24	9375	119.7
Radio Scripts	18	8408	100.1
Banners/Posters	25	7004	95.7
TV Scripts	13	6824	87.2
Price Cards/ Case Cards	14	6540	74.9
In-store Video Tapes	13	6141	66.3
Display Contests	20	5572	53.3

Other popular activities included banners, posters and radio scripts (Table 72). Very large and large firms recommended creative displays designed to educate consumers of the importance of shucking immediately prior to eating to preserve sweet corn freshness. One small firm suggested placing an in-store shucking bin next to product display for consumer convenience.

Desired attributes of specified promotional materials sponsored by the sweet corn industry are included in Table 73. In general, industry-sponsored ad materials tended to have specific size, color and language requirements. Several retailers recommended the sweet corn industry partner with other tie-in product companies; for example, joint advertising with national brand butter marketing group, offering a butter discount coupon with purchase of sweet corn.

Table 72. Other Retail Promotional Tools Used by Retailers, by Firm Size.

Size of Firm

Comments ^a

Very Large

Creative Displays

Large

Print ads; in house nutrition department, newspaper ad driven; small sign talking to guests concerning the major issue of preserving product quality by only shucking immediately before eating

Medium

Nutritional charts; weekly circular

Small

Shucking bin next to display

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Table 73. Retailers' Desired Attributes for Selected Promotional Materials.

Materials	Comments ^a
<u>Hard Copy Ad Slicks</u>	Color(2); 4"x5"
<u>Banners/Posters</u>	Variable; 20"x25"; 24"x36"; 22"x28"(2); 8'x3'; 9"x13" up to double that size; 24"x120"; 4"x8"; 3'x4'-bilingual, Spanish/English; 17"x23"; 2'x5'; 2'x3'
<u>Price Cards</u>	7"x11"(2); must be approved; 7"x11" or 11"x14"; 8"x10"(2); 10"x12"; 3"x5"; 5"x7"; 8.5"x11"
<u>Case Cards</u>	7"x11"; must be approved; 5"x7"(3); 6"x6"; 3"x5"; 8.5"x11"
<u>Recipe Cards</u>	3"x5" or 3"x7" if combined with nutritional brochure; 3"x5"(16); 4"x6" or 3"x5"
<u>Display Contests</u>	Sells product 50-60-70-100 per year - can be difficult, i.e. WA cherries, CA soft fruit- but displays equal sales dollars. Use photos for evaluation, in conjunction with sales results.
<u>Nutritional Brochures</u>	3"x7" if combined with recipe cards
<u>Other Materials</u>	Shoppers card to target different customers, or direct mailer; Consider coupon in ad piece, i.e. "buy dozen ears, get 50 cents off national brand butter", or "buy dozen ears, get free corn skewers" if skewers aren't too expensive - in the case of coupons, not as many are redeemed as may be offered on the product.

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Factors Affecting Fresh Sweet Corn Advertising

This section includes retailers' responses concerning weather influences, sweet corn advertising competition, and other factors that affect their sweet corn purchasing

decisions. All firm sizes advertised sweet corn prior to Memorial Day, the Fourth of July and Labor Day (Table 74). Other dates mentioned included the Easter holidays, summertime (July and August), Father’s Day, Mother’s Day, Cinco de Mayo and Canada’s Thanksgiving.

Table 74. Particular Dates or Holidays when Sweet Corn is Featured, by Firm Size.

Firm Size	Comments ^a
<u>Very Large</u>	Easter; Memorial Day(5); Labor Day(5); summer holidays; Fourth of July(5); April first of season
<u>Large</u>	Labor Day(3); early spring after Easter; all summer; Memorial Day(5); Fourth of July(4); Father’s Day; Mother’s Day
<u>Medium</u>	Memorial Day(10); Fourth of July(9); do not advertise corn or put on special; as early as possible in spring; summer holidays; Mother’s Day; Easter; Labor Day(8); start of warm weather; Cinco de Mayo; summer(2); entire months of July and August
<u>Small</u>	Fourth of July(9); Memorial Day(9); Labor Day(8); Thanksgiving-Canada; Father’s Day

When asked about the effects of weather on sweet corn sales in their stores, 84 percent of all firm categories indicated that weather had a direct effect on sales (Table 75). Specifically, warm/good weather was equated with improved sales, and cold/bad weather depressed sales of fresh sweet corn (Table 76). Some mentioned that consumers are accustomed to, and may even limit, their purchases of fresh sweet corn to “seasonal”, “cookout” and “holiday” occasions.

Table 75. “Does Weather Affect Sweet Corn Sales in Your Stores?”, Responses by Firm Size.

Firm Size	Responses					
	Yes Weather Affects Sales		No, Weather Does Not Affect Sales		Do Not Know	
	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	5	71	2	29	0	0
Large	7	100	0	0	0	0
Medium	12	86	1	7	1	7
Small	8	80	2	20	0	0
All Firms	32	84	5	13	1	3

^a All percentages are based upon the number of firms responding in each category. There were responses from 7 very large, 7 large, 14 medium, and 10 small firms for a total of 38. One medium-sized firm never features sweet corn. Percentages may not sum to 100.0 due to rounding.

Table 76. Effect of Weather on Sweet Corn Sales Mentioned by Respondents, by Firm Size.

Firm Size	Comments ^a
<u>Very Large</u>	Rain and cold reduce sales(4); sales increase during hot weather; sales are down during cold weather
<u>Large</u>	Barbecue weather; when hotter and sunnier, sales increase; snowstorms decrease sales; sales go up when weather improves; weather affects sales a little; the warmer the better-sales not good when snow is on the ground (Rochester, NY); increased sales during hot and dry weather; customers used to seasonal; warm equals more holiday driven
<u>Medium</u>	Rain and cold lowers sales(3); good weather equals good sales; warmer weather equals better sales(2); hot weather good for sales(2); less sold when weather is cold(2); warm weather, sunny days produce a lot of cookouts which include corn; spring warmer, sales go up
<u>Small</u>	When weather is cool, sales are down; sell more in warmer weather; hot weather, nice means sales are up; nicer weather equals increased sales(2); grilling; sales increase during hot and sunny weather; sales not good during rainy weather(2); when cold, sell less

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate number of buyers giving similar responses.

The decision to advertise sweet corn, however, is not affected by local weather conditions, according to 61 percent of all respondents (Table 77). Weather effects are more prevalent in large firms, with 57 percent claiming that warmer weather is the best time for advertising, while only 29 percent of the very large firms decide not to advertise based on weather conditions. Retailers’ perceive improvement in sweet corn sales due to product availability, seasonal quality, and the suitability of sweet corn for warmer weather cooling activities, i.e. outdoor grilling (Table 78).

Table 77. “Do Weather Conditions in your Retail Market Area Play a Role in Your Decision to Put Sweet Corn on Ad?”, Responses by Firm Size.

Firm Size	Responses			
	Weather Affects Ad Decision		Weather Does Not Affect Ad Decision	
	(N)	(%)	(N)	(%)
Very Large	2	29	5	71
Large	4	57	3	43
Medium	5	36	9	64
Small	4	40	6	60
All Firms	15	39	23	61

^a All percentages are based upon the number of firms responding in each category. There were responses from 7 very large, 7 large, 14 medium, and 10 small firms for a total of 38. One medium-sized firm never features sweet corn. Percentages may not sum to 100.0 due to rounding.

Table 78. Effect of Weather on Decision to Put Sweet Corn on Advertisement, by Firm Size.

Firm Size	Comments ^a
<u>Very Large</u>	Warmer weather is time to advertise; advertise in hot weather
<u>Large</u>	Will put on ad all year; ads are run when warm weather approaches; nice day, rosy, sunny equals good sales; advertise mid-April through early July because of warmer weather; warmer weather is good time to advertise corn
<u>Medium</u>	Weather [bad] affects availability; do not advertise corn or put on special; it's seasonal; will advertise during warmer weather; advertise when sunny; will advertise more during spring and summer; seasonal heat means more ads.
<u>Small</u>	Never advertise during winter; suitable for grilling; advertise when forecast is hot and sunny; don't advertise in cold weather

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate number of buyers giving similar responses.

The primary responses across firms indicate that sweet corn competes with all other produce items for promotional consideration, primarily melons, berries, soft fruits and cooking vegetables (Table 79). In contrast, three of the large firms claim fresh sweet corn “stands alone” or has no competition when advertising decisions are made.

Table 79. Produce Items Competing with Sweet Corn for Promotional Consideration, by Firm Size and Response Order.

Size of Firm, Response Order	Comments ^a
<u>Very Large</u>	<p><i>Primary Responses:</i> cantaloupe; fruit; melons; all produce in high demand-soft fruit, melon; soft fruits in spring</p> <p><i>Secondary Responses:</i> watermelons; berries</p> <p><i>Tertiary Responses:</i> stonefruit; berries</p>
<u>Large</u>	<p><i>Primary Responses:</i> all produce items; most produce; none, stands alone(2)</p>
<u>Medium</u>	<p><i>Primary Responses:</i> everything(2); grapes(2); cantaloupes; portabellas; strawberries</p> <p><i>Secondary Responses:</i> stonefruit(2); grapes; tomatoes</p> <p><i>Tertiary Responses:</i> soft fruits; tomatoes, squash</p>
<u>Small</u>	<p><i>Primary Responses:</i> everything; soft fruits; watermelons(2); strawberries; any similar cooking vegetables</p> <p><i>Secondary Responses:</i> melons; soft fruit; cantaloupes(2)</p> <p><i>Tertiary Responses:</i> grapes; tomatoes</p>

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Major market conditions, including sweet corn price, quality, and availability, were mentioned by all firms as the main factors effecting retailers' advertising decisions (Table 80). Secondary responses include retailer reliance on product information provided by growers and shippers, which indicates the potential for the sweet corn industry to directly influence retailer advertising decisions.

Table 80. Other Factors Determining Whether or Not to Put Sweet Corn on Advertisement, by Firm Size and Response Order.

Firm Size, Response Order	Comments ^a
<u>Very Large</u>	<i>Primary Responses:</i> quality(2); volume (lower cost, availability)(6); <i>Secondary Responses:</i> <i>peak of season; quality</i> <i>Tertiary Responses:</i> cost
<u>Large</u>	<i>Primary Responses:</i> quality; availability, time of year; availability(2); seasonality/right price/quality <i>Secondary Responses:</i> cost(3); grower/shippers have to say the product is right and the quantity is available <i>Tertiary Responses:</i> information that there are problems with the suppliers; quality
<u>Medium</u>	<i>Primary Responses:</i> cost(8); based on the market factors; availability of product; do not advertise corn or put on special(2); consumer desires; quality <i>Secondary Responses:</i> availability(2); market conditions; quality(2); price <i>Tertiary Responses:</i> quality
<u>Small</u>	<i>Primary Responses:</i> cost(6); quality(2); availability <i>Secondary Responses:</i> retail price; time of month; season-spring and summer; availability; quality(2) <i>Tertiary Responses:</i> condition/quality of product

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate number of buyers giving similar responses.

Finally, retailers were asked how the sweet corn industry can encourage them to more aggressively feature sweet corn during the late September through early July (Table 81). Improvement of the pricing structure emerged as the number one way producers can accomplish this goal. Correction of the current wide fluctuations in product prices and request for future provision of “good ad price” produce were offered as motivations that would inspire all firms, regardless of size. Also mentioned was the need for advance

notice of an adequate and high quality supply of product, as several felt that shippers themselves trigger fresh sweet corn sales. From a consumer standpoint, respondents suggested that by the end of the summer season people are “corned out”, and one very large firm offered the solution of “re-inventing” corn as a staple vegetable. Another medium firm asked for more pre-packaged, pre-cut, attractively packaged product to impress consumers.

Table 81. Ways To Get Retailers to Feature or Advertise Sweet Corn More Aggressively During The Late September – Early July Season.

Size of Firm, Response Order	Comments ^a
<u>Very Large</u>	<p><i>Primary Responses:</i> better quality product(2); keep costs down; keep price down(2); nothing comes to mind because you need quantity to advertise; adequate supply of product(2)</p> <p><i>Secondary Responses:</i> re-invent corn as a staple food so people will want to eat corn all year round; keep availability up; promotional pricing</p>
<u>Large</u>	<p><i>Primary Responses:</i> better communication about production scheduling; lower costs(2); more consistent pricing from Southern growers on all produce items including sweet corn, market fluctuations are too high (ranging from \$2-\$20 from week to week) and systems cannot move fast enough at the retail level to get rid of inventory; would advertise corn year-round if quantity/quality was available and if not too pricey, shippers trigger sales-they need to tell retailers when the product is ready to go, would not advertise on major holidays as too many other products are on ad, but during any of the off-weeks would be willing to put sweet corn on ad</p> <p><i>Secondary Responses:</i> appropriate quantity and quality to support ads; establish practices to prevent poor quality products from going out of state</p>
<u>Medium</u>	<p><i>Primary Responses:</i> better price on corn (10); reduce cost of product, at 63 cents an ear, difficult to promote; one time per month give us a good ad price so we could run a 4/\$1 –5/\$1 ad; improve quality(2); produce available at the right price, but consumers really not interested; sees no dollar “ring up,” doesn’t sell enough to advertise corn; costs must be competitive; during the Fall it won’t help; people are “corned-out” by late summer-I suggest more pre-packaged, pre-cut, i.e. attractive packaging</p> <p><i>Secondary Responses:</i> improve shipping containers; good availability (2); quality; in spring, more consistent product in the pack; better price</p> <p><i>Tertiary Responses:</i> improve taste</p>
<u>Small</u>	<p><i>Primary Responses:</i> retail price is what sells corn. To advertise, need a really great price like 8 ears for \$1.98; ad allowances for advertising or discount(3); no ideas; best possible corn for cheapest price; lower cost equals hot retail; support/advance notice on pricing; banners-promotions; quality</p> <p><i>Secondary Responses:</i> provide consistent count crates with high quality product-aggressive prices; availability at right price</p>

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

Effectiveness of the Southern Supersweet Identity

This last section concludes the survey with inquiries concerning retailers' knowledge of sweet corn growers and shippers. As indicated in the discussion of variety preferences, the trade has a fairly strong partiality for "Southern Supersweet", which they view as a "variety", not a brand name. This inclination is especially strong among the very large and large firms. The "Southern Supersweet Corn Council" does not currently enjoy a broad-based awareness within the trade (Table 82). Only six firms, fifteen percent of the total, recognized the name. In contrast, ten executives claimed familiarity with the "American Sweet Corn Association" (26 percent) and 14 knew of the "Florida Federation of Sweet Corn Growers" (36 percent), which is impressive given the fictitious nature of these supposed organizations. Overall, seven firms (18 percent) said they recalled receiving promotional materials for "Southern Supersweet Corn" (Table 83). Of these, three did not remember their impressions of the material, and three found the information "great", "good" and "okay" (Table 84).

Table 82. Retailers' Awareness of the Southern Supersweet Corn Council and Other Fictitious Trade Associations by Firm Size.

Trade Association/Firm Size Category	Indicated Awareness	
	Number	Percent ^a
"Southern Supersweet Corn Council"		
Very Large	0	0.0
Large	1	12.5
Medium	3	21.4
Small	2	20.0
All Firms	6	15.4
"American Sweet Corn Assn."		
Very Large	1	14.3
Large	2	25.0
Medium	4	28.6
Small	3	30.0
All Firms	10	25.6
"Florida Federation of Sweet Corn Growers"		
Very Large	4	57.1
Large	2	25.0
Medium	7	50.0
Small	1	10.0
All Firms	14	36.0
"National Sweet Corn Products Co-op"		
Very Large	2	28.6
Large	1	12.5
Medium	0	0.0
Small	0	0.0
All Firms	3	7.7

^a Percentages based upon the number of respondents in each firm size category. There were 7 very large, 8 large, 14 medium, and 10 small firms for a total of 39.

Table 83. Retailers' Recall of Having Received Promotional Materials for "Southern Supersweet Corn", by Firm Size.

Firm Size	Retailers that Recall Having Received Promotional Materials for Southern Supersweet Corn	
	Number	Percent ^a
Very Large	1	14.3
Large	1	12.5
Medium	3	21.4
Small	2	20.0
All Firms	7	18.0

^a Percentages are based upon the number of respondents in each firm size category. There were 7 very large, 8 large, 14 medium, and 10 small firms, for a total of 39.

Table 84. Respondents' Thoughts about "Southern Supersweet Corn" Promotional Materials, by Firm Size.

Size of Firms, Response Order	Comments ^a
<u>Very Large</u>	Good, but not useful in stores
<u>Large</u>	Brochures
<u>Medium</u>	Don't remember(2); nutritional information okay, went in store.
<u>Small</u>	No recollection; great

^a Semi-colons separate comments from different respondents. Numbers in parentheses indicate the number of buyers giving similar responses.

When asked to evaluate "Southern Supersweet Corn" as a trade name, only seven firms rated it as "very effective"; the same number rated it "moderately effective" and "slightly effective" (Table 85). Sixteen firms (41 percent) found the name "not at all effective".

Table 85. Retailers' Evaluation of the Trade Name "Southern Supersweet Corn", by Firm Size.

Firm Size	N	Effectiveness Rating									
		Very Effective		Moderately Effective		Slightly Effective		Not At All Effective		No Opinion	
		(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Very Large	7	1	- ^a	2	-	2	-	2	-	0	-
Large	8	0	-	2	-	2	-	3	-	1	-
Medium	14	4	-	1	-	1	-	7	-	1	-
Small	10	2	-	2	-	2	-	4	-	0	-
All Firms	39	7	18	7	18	7	18	16	41	2	5

^a Percentages are not shown because of the small numbers of observations in each size category.

Although some respondents made positive comments about the "Southern Supersweet Corn" brand name, others criticized it for the "southern" connotation (Table 86). "Supersweet" definitely has positive associations and enjoys a relatively wide awareness across the nation, for both retailers and consumers, but "Southern" does not appear to enhance the overall product image (with the exception of those stores located in the South, i.e. Dallas area).

Table 86. Respondents' Reasons for Effectiveness Ratings of the Trade Name "Southern Supersweet Corn", by Effectiveness Rating.

Effectiveness Rating	Comments ^a
<u>Very Effective</u>	Supersweet is best; it is already in use and people like it; "Southern" is good in the Dallas area; supersweet means quality; consumer confidence that corn is sweet; name is great
<u>Moderately Effective</u>	Catchy; names aren't important; consumers will ask for supersweet variety; brand name- identifiable; sounds good
<u>Slightly Effective</u>	Plenty of room for growth; "Southern" doesn't really resonate in the Midwest; good ring
<u>Not at All Effective</u>	Name doesn't help corn!; not recognizable; people buy corn if it is fresh, not by brand; good stuff on counter is what sells; no impression; customers don't care; too long!; sweet corn not marketed by name; upper Midwest customers don't relate to "Southern" but do to "Supersweet"; regional-Northeast; not sufficiently promoted with materials; sales not related to location; haven't heard of it yet

^a Semi-colons separate comments from different respondents.

Not one firm expressed a preference for a branded product versus generic sweet corn (Table 87). Most said there was no difference in profitability. Several did admit that branded product was slightly more profitable than generic, and one assigned it to be considerably more. However, two of the respondents claimed branded products were less profitable. It appears that the trade recognition and appreciation of the “Supersweet” identity is still too low to command a premium price. In summary, with greater emphasis on trade communication and promotion, “Supersweet” could quickly evolve into a premium product with excellent image qualities at the consumer level.

Table 87. Produce Buyers’ Evaluations of Profitability of Branded vs. Generic Sweet Corn, by Firm Size.

Evaluation of Profitability	Firm Size									
	Small		Medium		Large		Very Large		All Firms	
	(N)	(%) ^a	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
No Difference	7	70	10	71	7	88	6	86	30	77
Slightly less profitable	0	0	1	7	1	12	0	0	2	5
Slightly more profitable	1	10	1	7	0	0	0	0	2	5
Considerably more profitable	0	0	1	7	0	0	0	0	1	3
Do not know	2	20	1	7	0	0	1	14	4	10
Totals	10	100	14	100	8	100	7	100	39	100

^a All percentages are based upon the numbers of firms within the respective categories. Totals may not sum to 100% due to rounding. Percentages are based upon the number of respondents in each firm size category. There were 7 very large, 8 large, 14 medium, and 10 small firms, for a total of 39.

Consumer Survey

Consumer Survey Data Description

This sample is designed to capture differences in the purchase and consumption of fresh sweet corn across geographic regions and selected socio-demographic characteristics. The most important of the sample characteristics are geography, race, education level, income level, age, and household size. Approximately 200 responses were obtained from each of the following five cities: Dallas, Atlanta, Chicago, Boston, and Philadelphia. The exact number of responses from each city is presented in Table 88. The sample as a whole consists of 1031 completed phone interviews. Phone numbers within each city were generated randomly, therefore the sample is representative of the populations for each of these (and similar) cities, but not necessarily for the United States as a whole. Each working, randomly-generated telephone number was contacted as many as six times in an attempt to obtain an interview. Call-back attempts were made at different times of the day, nights and weekends in order to assure randomness of respondents.

Table 88. Number of Completed Interviews, by City.

City	Number
Dallas	204
Atlanta	200
Chicago	201
Boston	224
Philadelphia	202

Because this sample is designed to reveal the consumption behavior of various demographic groups some over-sampling occurs. For example, blacks make up 30.8

percent of this sample (Table 89) compared to 12.3 percent of the U.S. population (2000 Census at www.infoplease.com, December, 2001). In order to capture cultural differences, a new variable that combines race and ethnicity has been generated to identify Hispanics apart from other racial categories. Under this definition, “Black” refers to non-Hispanic Black, “White” represents only non-Hispanic Whites, and the Hispanic category represents those of Hispanic ancestry regardless of their race. The race/ethnicity variable also has an Asian category, but the 5 American Indians in the sample and the rest of those in the “Other” racial category (28 respondents) have been grouped in the White category. Non-Hispanic Blacks account for 27.8 percent of the sample, non-Hispanic Whites are 59 percent, Hispanics, 10.1 percent, and Asians make up 3.1 percent (Table 90).

Table 89. Racial Composition of the Total Sample.

Race	Number	Percent
Black	302	30.78
White	564	57.49
Other	115	11.72

Table 90. Race and Ethnicity of all Respondents.

Race/Ethnicity	Number	Percent
Black, Non-Hispanic	273	27.83
White, Non-Hispanic	579	59.02
Hispanic, all races	99	10.09
Asian	30	3.06

Educational attainment was classified into two categories, “high school” and “college”. The high school category contains all those with less than a high school diploma, high school and vocational school graduates. The college category includes all respondents that have attended or graduated from college. The high school category

accounted for 30.5 percent of the sample, compared to 69.5 percent in the college category. Households earning at least \$70,000 make up the largest income group (28 percent of the sample), followed by households earning between \$35,000 and \$49,999 (23 percent) and \$20,000 to \$34,999 (20.9 percent). Households earning less than \$20,000 constituted 12.6 percent of the sample (Table 91).

Table 91. Income Distribution, All Cities.

Income Level ^a	Number	Percent
Under \$20,000	95	12.57
\$20,000 - \$34,999	158	20.90
\$35,000 - \$49,999	175	23.15
\$50,000 - \$69,000	116	15.34
\$70,000 and Above	212	28.04

Table 92 . Age Categories of Respondents, All Cities.

Age Category	Number	Percent
65 and Older	146	15.26
50 – 64	171	17.87
35 – 49	263	27.48
18 – 34	377	39.39

Approximately 40 percent of the sample is between 18 and 34 years of age, while two-thirds of the respondents are younger than 50 years of age (Table 92). Two-thirds of the households have no children, while slightly less than half the households (46.5 percent) have exactly two adults (Tables 93 and 94). The mean household size is 2.8 people. The sample contains nearly twice as many females (64.5 percent) as males (35.5 percent).

Table 93. Number of Children Under 18 in Household, All Cities.

Number of Children	Number	Percent
0	615	66.27
1 – 2	229	24.68
3 or More	84	9.05

Table 94. Number of Adults 18 and Older in Household, All Cities.

Number of Adults	Number	Percent
1	342	33.89
2	469	46.48
3 or More	198	19.62

The cities chosen for this study vary significantly across all the demographic variables. Income varies significantly across cities; respondents in Boston and Atlanta have the highest proportion of households with incomes of \$70,000 or higher. Thirty-five percent of households in Boston and 31 percent in Atlanta have incomes above \$70,000 compared to 19 percent in Philadelphia and 26 percent in Dallas. Conversely, 14 percent of households in Philadelphia and 13 percent in Dallas have incomes below \$20,000, compared to 12 percent and 9 percent for Boston and Atlanta. Chicago has the smallest middle-income group with disproportionately large fractions having incomes below \$20,000 and above \$50,000 (Table 95). Since education level is highly correlated with income, it is not surprising that Boston and Atlanta have the highest fractions of respondents with at least some college education, while Philadelphia and Dallas have the highest fractions of respondents whose education stops after high school or vocational training (Table 96).

Table 95. Respondents' Income Levels, by City.

City ^a	Income Level									
	Under \$20,000		\$20,000 - \$34,999		\$35,000 - \$49,999		\$50,000 - \$69,666		\$70,000 and Above	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	19	12.7	44	29.5	37	24.8	10	6.7	39	26.1
Atlanta	14	9.1	34	22.1	34	22.1	25	16.2	47	30.5
Chicago	21	15.1	25	18.0	28	20.1	26	18.7	39	28.1
Boston	20	11.9	25	14.9	32	19.0	32	19.0	59	28.1
Philadelphia	21	14.4	30	20.6	44	30.1	23	15.7	28	19.2
Totals	95	12.6	158	20.9	175	23.1	116	15.3	212	28.0

^a Chi-square probability = 0.0052.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 96. Respondents' Educational Levels, by City.

City ^a	Education Level			
	High School or Vocational		College	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	61	30.5	139	69.5
Atlanta	52	26.7	143	73.3
Chicago	58	29.4	139	70.6
Boston	46	21.2	171	78.8
Philadelphia	90	45.7	107	54.3
Totals	307	30.5	699	69.5

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

The five cities also have significantly different racial/ethnicity profiles. Philadelphia and Atlanta have the highest proportion of blacks in the sample with 40 percent and 37 percent respectively. Boston and Dallas have the highest percentages of whites in the sample with 72 percent and 67 percent respectively. Fifteen percent of Chicago's population is Hispanic, twelve percent of Dallas' population is Hispanic, but only five percent of the Atlanta sample is comprised of Hispanics. The number of Asians in the sample is small (30 respondents), but they are best represented in Chicago where they make up 4.6 percent of the population (Table 97).

There is considerable difference in the number of years that respondents have resided in a particular city. For example, 82 percent of respondents in Philadelphia have lived there for 16 years or more. Compare this to Boston, where 51 percent have lived there for at least 16 years, but 30 percent have lived there for less than 6 years. Atlanta also seems to have a more mobile population, while Chicago has more long-term residents (Table 98). Given that younger adults tend to be more mobile, it is not unexpected that Philadelphia and Chicago have relatively fewer young adults and more residents over 50 years of age (Table 99). In all cities, the largest age category is 18-34 years old, however, in Philadelphia, 39 percent of the residents are over 50 years of age, and in Chicago 35 percent are over 50. This compares to only 29 percent over 50 years old in both Boston and Atlanta, where 49 percent and 43 percent respectively, are between 18 and 34 years old.

Table 97. Racial and Ethnic Composition of the Sample, by City.

City ^a	----- Race and Ethnicity -----							
	Black, Non-Hispanic		White, Non-Hispanic		Hispanic, all races		Asian	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	36	17.9	135	67.2	24	11.9	6	3.0
Atlanta	71	37.4	104	54.7	10	5.3	5	2.6
Chicago	58	29.7	99	50.8	29	14.9	9	4.6
Boston	34	16.2	152	72.4	18	8.6	6	2.9
Philadelphia	74	40.0	89	48.1	18	9.7	4	2.2
Totals	273	27.8	579	59.0	99	10.1	30	3.1

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 98. Number of Years Lived in City, by City.

City ^a	Years Lived in City					
	0 – 5		6 – 15		16 or more	
	(N)	(Percent) ^b	(N)	(Percent)	(N)	(Percent)
Dallas	47	23.5	31	15.5	122	61.0
Atlanta	50	25.6	50	25.6	95	48.7
Chicago	32	16.3	26	13.7	138	70.4
Boston	66	30.4	40	18.4	111	51.2
Philadelphia	17	8.7	19	9.7	160	81.6
Totals	212	21.1	166	16.5	626	62.4

^a Chi-square probability = <0.0001.

^b Percents may not total to 100 due to rounding

Table 99. Age of Respondents, by City.

City ^a	Age of Respondent -----							
	18 to 34		35 to 49		50 – 64		65 or older	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	63	33.7	61	32.6	32	17.1	31	16.6
Atlanta	81	43.1	53	28.2	29	15.4	25	13.3
Chicago	77	39.9	48	24.9	40	20.7	28	14.5
Boston	100	48.5	46	22.3	36	17.5	24	11.6
Philadelphia	56	30.6	55	30.0	34	18.6	38	20.8
Totals	377	39.4	263	27.5	171	17.9	146	15.3

^a Chi-square probability = 0.0303.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 100. Number of Children in the Sample Households, by City.

City ^a	Number of Children					
	0		1-2		3 or More	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	134	66.3	48	23.8	20	9.9
Atlanta	119	75.8	28	17.8	10	6.4
Chicago	114	64.8	44	25.0	18	10.2
Boston	137	70.3	45	23.1	13	6.7
Philadelphia	111	56.1	64	32.3	23	11.6
Totals	615	66.3	229	24.7	84	9.0

^a Chi-square probability = 0.0206.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 101. Number of Adults in the Sample Households, by City.

City ^a	Number of Adults					
	1		2		3 or More	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	75	37.3	98	48.8	28	13.9
Atlanta	78	40.4	83	43.0	32	16.6
Chicago	67	33.5	87	43.5	46	23.0
Boston	59	27.2	107	49.3	51	23.5
Philadelphia	63	31.8	94	47.5	41	20.7
Totals	342	33.9	469	46.5	198	19.6

^a Chi-square probability = 0.0601.

^b Horizontal percentages may not total to 100.0 due to rounding.

In general, households are most likely to have two adults (46 percent of all households in the sample have exactly two adults), and two-thirds of households have no children. However, the composition of households varies by city. In Philadelphia, 44 percent of households have children, and one quarter of these have more than 3 children. In Atlanta, on the other hand, 76 percent of households have no children, and 40 percent have only one adult. Chicago has close to the sample average of children in 35 percent of households, while Dallas and Boston fall somewhat below that. Chicago and Boston have the highest proportion of households (23 percent) with 3 or more adults (Tables 100 and 101).

General Sweet Corn Consumption Patterns

In the overall sample, 667 households (67.7 percent) buy sweet corn at least once a year. The pattern of sweet-corn consumption, however, varies significantly across nearly every demographic. In general, the proportion of sweet corn buyers increases with household size, income and education. Middle-aged consumers are more likely to buy sweet corn than young consumers, and women are slightly more likely to buy than men. The likelihood of a household buying sweet corn varies significantly among the five cities. People in Chicago and Philadelphia are most likely to buy sweet corn, with 73.6 percent of respondents and 72.3 percent, respectively, buying sweet corn. Compare this to a low of 62.2 percent in Dallas and 63.8 percent in Boston (Table 102). The Chi-square statistic shows that this relationship is significant at the 5 percent level (with an alpha of 5 percent)¹. Consumers in Chicago and Philadelphia also tend to buy more ears of corn in each purchase. The average number of ears purchased in Philadelphia is 8.0 and in Chicago it is 7.3. In contrast, consumers in Dallas typically buy 5.3 ears of corn in each purchase (Table 103). Another important component in total sales of sweet corn is the number of times per year that consumers buy sweet corn. Briefly, consumers in Philadelphia buy sweet corn more frequently than do consumers in other cities, but those in Chicago do not. However, because this variable varies considerably by season, it is discussed in detail in a following section.

¹ The reported Chi-square value in Table c16 is a p-value of 0.0492, which indicates that the observed pattern might occur randomly 4.92 percent of the time. Thus, the confidence interval for this table is greater than 95 percent, and we can say it is significant with an alpha of 5% or at the 5% level.

Table 102. Households' Purchase of Sweet Corn , by City.

City ^a	Does Household purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	127	62.2	77	37.8
Atlanta	133	66.8	66	33.2
Chicago	148	73.6	53	26.4
Boston	143	63.8	81	36.2
Philadelphia	146	72.3	56	27.7
Totals ^b	697	67.7	333	32.3

^a Chi-square probability = 0.0771.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 103. Average Number of Sweet Corn Ears Purchased Each Time, by City.

City ^a	Average Number of Ears Purchased
Dallas	5.3
Atlanta	6.3
Chicago	7.3
Boston	6.8
Philadelphia	8.0
All Cities	6.8

Race and ethnicity do not have a statistically significant effect on whether or not consumers' buy sweet corn, on an overall basis, but there are significant seasonal purchase differences. It is worth noting that Asians are much less likely than those in other races to buy sweet corn (Table 104).

Education level and income level both are statistically significant determinants of the decision to buy sweet corn. The Chi-square statistic shows that education is significant at the five percent level, and income at the one percent level. Of those in the

Table 104. Households' Purchase of Sweet Corn, by Race and Ethnicity.

Race/Ethnicity	Does Household Purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^a	(N)	(Percent) ^a
Black, Non-Hispanic	188	68.9	85	31.1
White, Non-Hispanic	402	69.4	177	30.6
Hispanic, all races	66	67.3	32	32.6
Asian	15	50.0	15	50.0
Totals	671	68.5	309	31.5

^a Chi-square probability = 0.1671.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 105. Households' Purchase of Sweet Corn, by Level of Education.

Education Level ^a	Does Household Purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
High School, or Vocational	198	64.7	108	35.3
College	492	70.4	207	26.6
Totals	690	68.7	315	31.3

^a Chi-square probability = 0.0414.

^b Horizontal percentages may not total to 100.0 due to rounding.

“college” category 70.4 percent buy sweet corn versus 64.7 percent of those in the “high school” category (Table 105). Similarly, the level of income directly affects the proportion of consumers who buy sweet corn. Of those earning less than \$20,000, 57.8 percent buy sweet corn. The proportion increases consistently with income to where 82.5 percent of households with income over \$70,000 buy sweet corn (Table 106).

There are large age differences among those who buy sweet corn. Approximately 80 percent of those between 35 and 64 years of age buy sweet corn. Only 56.5 percent of those between 18 and 34 years of age buy sweet corn, while 62.3 percent of those 65 and older buy it (Table 107). This relationship is also significant at the 99 percent level of confidence.

Table 106. Households' Purchase of Sweet Corn, by Income Level.

Income Level ^a	Does Household Purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Under \$20,000	55	57.8	40	42.1
\$20,000 - \$34,999	96	60.8	64	39.2
\$35,000 - \$49,999	123	70.3	52	29.7
\$50,000 - \$69,000	89	76.7	27	23.3
\$70,000 and Above	175	82.5	37	17.4
Totals	538	71.2	218	28.8

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 107. Households' Purchase of Sweet Corn, by Age of Respondent.

Age of Respondent ^a	Does Household Purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
18 - 34	213	56.5	164	43.5
35 - 49	209	79.9	53	20.2
50 - 64	140	81.9	31	18.1
65 and Older	91	62.3	55	37.7
Totals	653	68.3	303	31.7

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

Household size is associated with the decision to buy sweet corn. Households with only one adult and households with no children buy corn 61 percent and 64.5 percent of the time, respectively. On the other hand, more than 71 percent of households with two or more adults buy corn, and over 76 percent of households with children buy sweet corn (Tables 108 and 109). These relationships also are significant at the 99 percent level of confidence. Gender is also a significant factor in the decision to buy sweet corn, with 69.8 percent of women buying sweet corn, versus 63.8 percent of men (Table 110).

Table 108. Households' Purchase of Sweet Corn, by Number of Adults in Household.

Number of Adults ^a	Does Household Purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent)
1	208	61.0	133	39.0
2	338	72.0	131	27.9
3 or More	141	71.2	57	28.8
Totals	687	68.1	321	31.8

^a Chi-square probability = 0.0002.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 109. Households' Purchase of Sweet Corn, by Number of Children Under 18 in Household.

Number of Children Under 18 ^a	Does Household Purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
0	397	64.5	218	35.4
1 - 2	177	77.3	52	22.7
3 or More	64	76.2	20	23.8
Totals	638	68.8	290	31.2

^a Chi-square probability = 0.0006.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 110. Households' Purchase of Sweet Corn, by Gender.

Gender ^a	Does Household Purchase Sweet Corn?			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Male	233	63.8	132	36.2
Female	464	69.8	201	30.2
Totals	697	67.7	333	32.03

^a Chi-square probability = 0.0513.

^b Horizontal percentages may not total to 100.0 due to rounding.

The most-commonly cited reason for not buying corn is that the respondent does not like the taste. Thirty percent of all those who do not buy sweet corn gave taste as the reason (Table 111). Twenty-two percent were concerned with the amount of preparation time or inconvenience, with an additional seven percent bothered by the messiness. Eight percent were concerned by a lack of freshness, while seven percent do not cook, and seven percent prefer canned or frozen corn. Dental concerns were cited by five percent as

a reason not to buy sweet corn, with a majority of these in the oldest age group. Price is not an important consideration for non-buyers. Only three percent of respondents mentioned a high price as a reason not to buy sweet corn.

Table 111. Reasons Respondents Do Not Buy Sweet Corn.

Reason	Number	Percent ^a
Don't Like Taste	96	30
Prep Time/Inconvenient	71	22
Other	57	18
Not Fresh	27	8
Do not Cook	23	7
Prefer Canned or Frozen	22	7
Too Messy	21	7
Dental Problems	16	5
Not available	15	5
Goes Bad	14	4
Health, Allergy	12	4
Don't Eat/Buy It	12	4
Texture, Starchy	11	3
Price Too High	10	3
Health, calories	10	3
Damaged	7	2
Pack Too Large	4	1
Don't Know How Cook	4	1

^a Percentages are based on 321 respondents who do not buy corn.

Price of fresh sweet corn. Respondents that buy sweet corn for their households were asked “In your opinion, what is a fair price for fresh sweet corn on the cob?” The price considered to be fair by those who do buy corn, averaged \$0.28 per ear (Table 112). Overall, 25.5 percent of those who buy corn said that a fair price per ear would be between \$0.25 and \$0.29 (Table 113). As many consumers were willing to pay between \$0.50 and \$0.59 per ear as were willing to pay \$0.20 to \$0.24 per ear (11.9 and 11.7 percent, respectively).

Table 112. Respondents' Perceived "Fair Price" for Fresh Sweet Corn, by City.

City ^a	"Fair Price"
	(Cents per ear)
Dallas	29.7
Atlanta	34.6
Chicago	20.6
Boston	30.7
Philadelphia	23.4
All Cities	27.6

Table 113. Fair Price for Fresh Sweet Corn, by City.

Fair Price	Dallas (n=92)		Atlanta (n=97)		Chicago (n=115)		Boston (n=111)		Philadelphia (n=99)		Total (n=514)	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
<\$0.10	11	12.0	7	7.2	7	6.1	7	6.3	13	13.1	45	8.7
\$0.10-0.14	5	5.4	2	2.1	41	35.7	16	14.4	21	21.2	85	16.5
\$0.15-0.19	4	4.4	3	3.1	9	7.8	4	3.6	6	6.1	26	5.1
\$0.20-0.24	8	8.7	8	8.3	7	6.1	24	21.6	13	13.1	60	11.7
\$0.25-0.29	29	31.5	29	29.9	33	28.7	22	19.8	18	18.2	131	25.5
\$0.30-0.39	10	10.9	16	16.5	5	4.4	7	6.3	11	11.1	49	9.5
\$0.40-0.49	2	2.2	3	3.1	3	2.6	6	5.4	5	5.1	19	3.7
\$0.50-0.59	16	17.4	17	17.5	6	5.2	4	12.6	8	8.1	61	11.9
\$0.60 or greater	7	7.6	12	12.4	4	3.5	11	9.9	4	4.0	38	7.4

The average price considered fair by consumers varied considerably by city. At \$0.35 per ear, the average price considered fair in Atlanta is over 50 percent higher than the average price in Chicago of \$0.21 per ear. The price considered to be fair also varies by level of education, with the majority of those with some college education mentioning a price between \$0.20 and \$0.39 per ear. Consumers with less than college education had somewhat higher proportions considering a fair price to be less than \$0.20 and higher than \$0.39 (Table 114). One possible explanation for this difference is that consumers with some college education are more informed about corn prices. A second possible explanation is that the two groups have different patterns of consumption and are considering corn prices during different seasons. The seasonality of sweet corn consumption is considered in detail in a later section.

Table 114. Fair Price for Fresh Sweet Corn, by Education.

Fair Price ^a	Education Level					
	Less than College (n=158)		Some College or Above (n=356)		Total (n=514)	
	(N)	(percent)	(N)	(percent)	(N)	(percent)
<\$0.10	20	12.7	25	7.0	45	8.8
\$0.10-0.14	29	18.4	56	15.7	85	16.5
\$0.15-0.19	11	7.0	15	4.2	26	5.1
\$0.20-0.24	17	10.8	43	12.1	60	11.7
\$0.25-0.29	30	19.0	101	28.4	131	25.5
\$0.30-0.39	10	6.3	39	11.0	49	9.5
\$0.40-0.49	7	4.4	12	3.4	19	3.7
\$0.50-0.59	22	13.9	39	11.0	61	11.9
\$0.60 or greater	12	7.6	26	7.3	38	7.4

^aChi-square probability = 0.092.

Fresh sweet corn variety preferences. In general, consumers did not express a strong preference for any variety of sweet corn. Only 16.5 percent of those who buy sweet corn expressed a preference for any variety at all. Of those, Silver Queen was by

far the most popular choice, with 38 consumers (5.7 percent) mentioning it. “Butter and Sugar” was the second-most frequently mentioned variety with 10 responses (1.5 percent). “Southern Supersweet” was mentioned as a preferred “variety” by less than one percent of all sweet-corn buyers (Table 115).

Table 115. Preferred Variety of Fresh Sweet Corn, All Cities.

Preferred Variety	Number	Percent
Silver Queen	38	5.7
Butter and Sugar	10	1.5
Jersey	6	0.9
Southern Supersweet	5	0.7
Sugar Buns	4	0.6
White	4	0.6
Kandy Korn	3	0.4
Snogold	2	0.3
Honey Sweet	1	0.1
Other	42	6.3
No Preference	553	82.8

Fresh sweet corn color preferences. Consumers do express significant differences in their preferences for a particular color of sweet corn. Yellow corn is preferred by approximately half of all corn buyers in the sample. White is the color choice of 29.1 percent of respondents, bi-color is preferred by 13.4 percent, and 7.9 percent have no preference (Table 116). The most important reason given for any color preference is that the respondent thinks it tastes better. This is especially true for white and bi-color buyers. Nearly two-thirds of those who preferred white or bi-color corn offered “Taste” as a

Table 116. Color Preferences for Sweet Corn, All Buyers.

Preferred Color	Number	Percent
Yellow	343	49.49
White	202	29.15
Bicolor	93	13.42
No preference	55	7.94

reason for their choice, compared to less than half of yellow-corn buyers (Table 117 and Figure 1). Similarly, over one-third of white-corn and bi-color corn buyers offered “Sweeter” as a reason, compared to 16 percent of yellow corn buyers. “Habit” was the one reason frequently mentioned by yellow-corn buyers (26 percent of respondents) that was not an important reason for other corn buyers (5 to 7 percent for white and bi-color, respectively). “Appealing Color” was important to 21 percent of those buying bi-color corn, and 18 percent of those buying yellow corn.

Color preferences differ significantly by city. Consumers in Dallas and Chicago expressed very strong preferences for yellow corn, with over 62 percent of buyers preferring yellow corn (Table 118 and Figures 2 and 3). Philadelphia shows a marked preference for white corn over yellow corn, with 52 percent favoring white and 39 percent choosing yellow. Consumers in Atlanta show no preference between white and yellow corn: 42 percent prefer the former and 41 percent the latter. Bi-color corn has its biggest following in Boston, where 28 percent of consumers prefer it to the other colors. Overall, Boston has the most equally divided preferences among colors with 41 percent favoring yellow, 28 percent bi-color, and 20 percent white corn.

Figure 1. Major Reasons Given for a Color Preference.

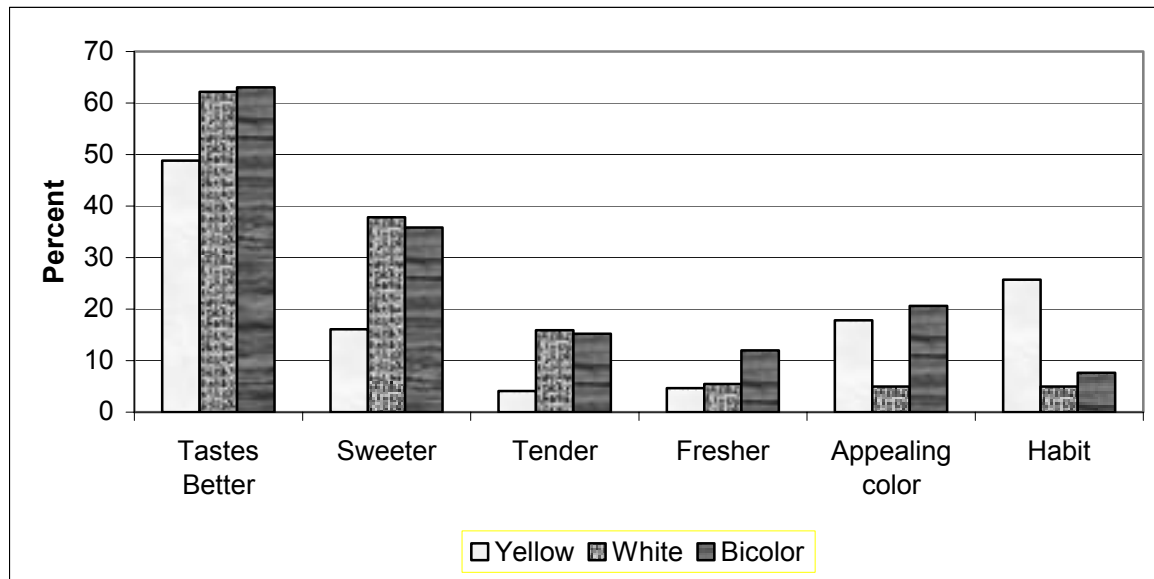


Table 117. Reasons Why Respondents Prefer a Particular Color of Sweet Corn.

Reason	Yellow		White		Bi-Color	
	(N)	Percent ^a	(N)	Percent ^b	(N)	Percent ^c
Tastes Better	167	48.8	125	62.2	58	63.0
Habit	88	25.7	10	5.0	7	7.6
Appealing color	61	17.8	10	5.0	19	20.7
Sweeter	55	16.1	76	37.8	33	35.9
Other	17	5.0	8	4.0	7	7.6
Fresher	16	4.7	11	5.5	11	12.0
Only Type Avail.	14	4.1	0	0.0	5	5.4
Tender	14	4.1	32	15.9	14	15.2
Don't Know	12	3.5	2	1.0	4	4.3
Grew Up On It	7	2.0	0	0.0	0	0.0
More Nutritious	7	2.0	3	1.5	2	2.2
Low Price	5	1.5	1	0.5	2	2.2
Advertising	4	1.2	1	0.5	1	1.1
Better Recipes	4	1.2	7	3.5	4	4.3
Lower in Calories	3	0.9	1	0.5	1	1.1
Better Smell	1	0.3	4	2.0	2	2.2
More Firm	1	0.3	2	1.0	0	0.0
Not Too Sweet	1	0.3	3	1.5	1	1.1
Organic	1	0.3	0	0.0	1	1.1
More Crisp	0	0.0	3	1.5	0	0.0

^a Percentages are based on 342 respondents who prefer yellow corn.

^b Percentages are based on 201 respondents who prefer white corn.

^c Percentages are based on 92 respondents who prefer bi-color corn.

Table 118. Respondents' Sweet Corn Color Preference, by City.

City ^a	Sweet Corn Color Preference							
	Yellow		White		Bicolor		No Preference	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	81	64.3	26	20.6	12	9.5	7	5.6
Atlanta	55	41.3	56	42.1	11	8.3	11	8.3
Chicago	91	62.6	16	11.0	26	17.9	12	8.3
Boston	59	41.3	28	19.6	40	28.0	16	11.2
Philadelphia	57	39.0	76	52.0	4	2.7	9	6.2
Totals	343	49.5	202	29.1	93	13.4	55	7.9

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

Figure 2. Sweet Corn Color Preference by City.

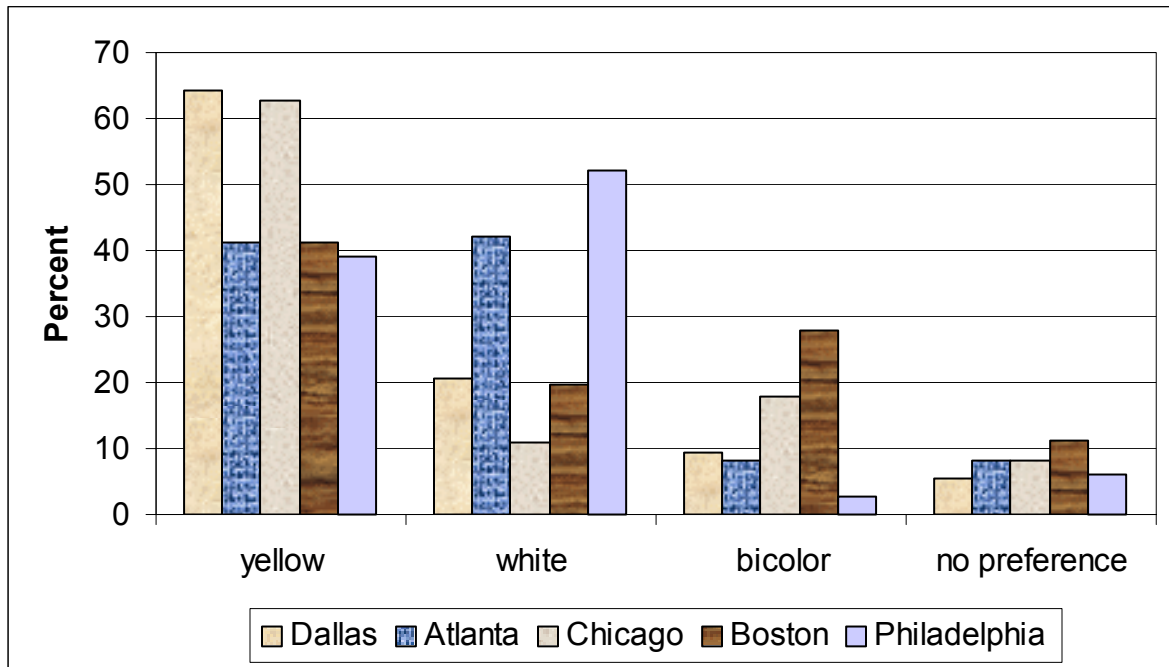
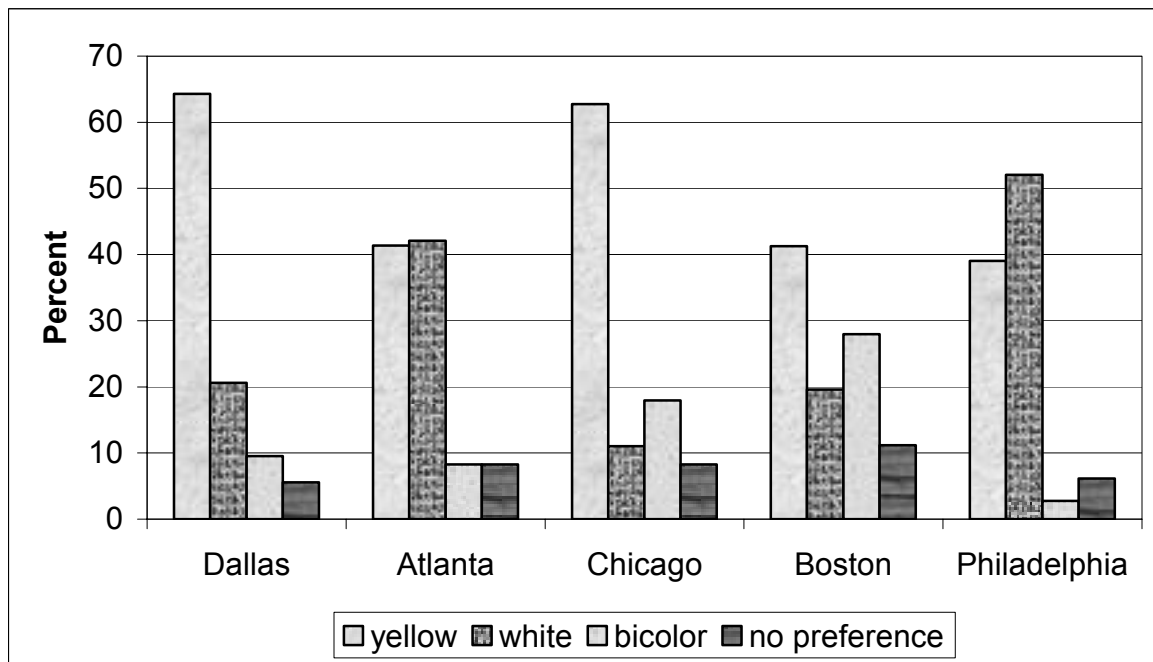


Figure 3. Sweet Corn Color Preference by City.



Interestingly, preferences for yellow corn tend to diminish as income levels increase, while preferences for bi-color corn and white corn increase. For those consumers with income below \$20,000, 62 percent prefer yellow corn and 27 percent prefer one of the other two colors. When household income exceeds \$70,000, however, 43 percent prefer yellow corn and 50 percent prefer either white or bi-color corn (Table 119 and Figure 4). The same pattern of choice is apparent according to the level of education. For those with no college-level study, 58 percent prefer yellow corn, 28 percent prefer white corn, and 6 percent prefer bi-color. For those with college-level study, preference for yellow corn falls to 47 percent, while 29 percent prefer white corn and 16 percent prefer bi-color corn (Table 120 and Figure 5).

In terms of cultural differences, Asians, Hispanics, and Blacks have a very clear preference for yellow corn. Seventy-three percent of Asians, 70 percent of Hispanics, and 64 percent of Blacks favor yellow corn. Twenty percent of Asians and Blacks, and 14 percent of Hispanics prefer white corn. The case is much different for Whites. Thirty nine percent prefer yellow corn, 35 percent prefer white corn and 18 percent prefer bi-color corn (Table 121 and Figure 6).

In terms of other demographic variables, only age and the number of children in the household have any discernable effect on color preferences. There is some indication that younger adults and households with children lean towards favoring yellow corn, while adults over 50 and households without children have a slightly disproportionate preference for bi-color corn. The magnitude of the differences is small, however, and these relationships are not statistically significant at the ten percent level.

Table 119. Respondents' Sweet Corn Color Preference, by Income Level.

Income Level ^a	Sweet Corn Color Preference -----							
	Yellow		White		Bicolor		No Preference	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Under \$20,000	34	61.8	11	20.0	4	7.3	6	10.9
\$20,000 - \$34,999	57	59.4	23	24.0	10	10.4	6	6.2
\$35,000 - \$49,999	69	57.0	31	25.6	14	11.6	7	5.8
\$50,000 - \$69,999	37	41.6	26	29.2	15	16.8	11	12.4
\$70,000 and Above	75	43.3	60	34.7	26	15.0	12	6.9
Totals	272	50.9	151	28.3	69	12.9	42	7.9

^a Chi-square probability = 0.0760.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 120. Respondents' Sweet Corn Color Preference, by Education Level.

Education Level ^a	Sweet Corn Color Preference -----							
	Yellow		White		Bicolor		No Preference	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
High School or Vocational	114	57.6	55	27.8	12	6.1	17	8.6
College	228	46.7	143	29.3	79	16.2	38	7.8
Totals	342	49.9	198	28.9	91	13.3	55	8.0

^a Chi-square probability = 0.0024.

^b Horizontal percentages may not total to 100.0 due to rounding.

Figure 4. Sweet Corn Color Preference by Income Category.

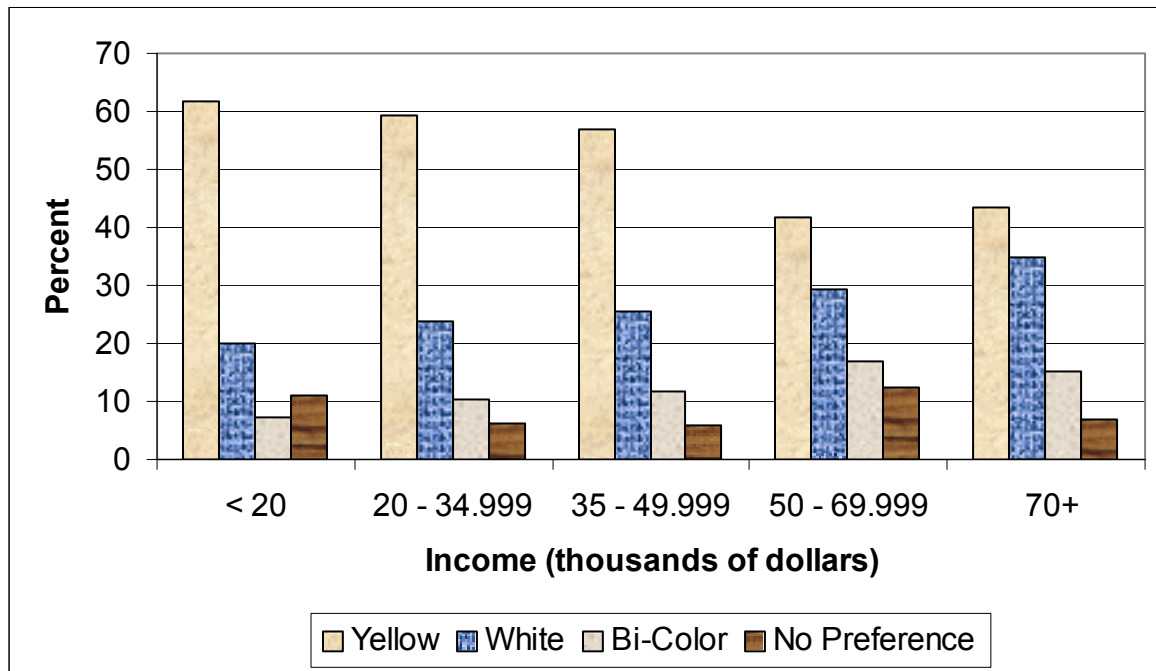


Figure 5 . Sweet Corn Color Preference by Education Level.

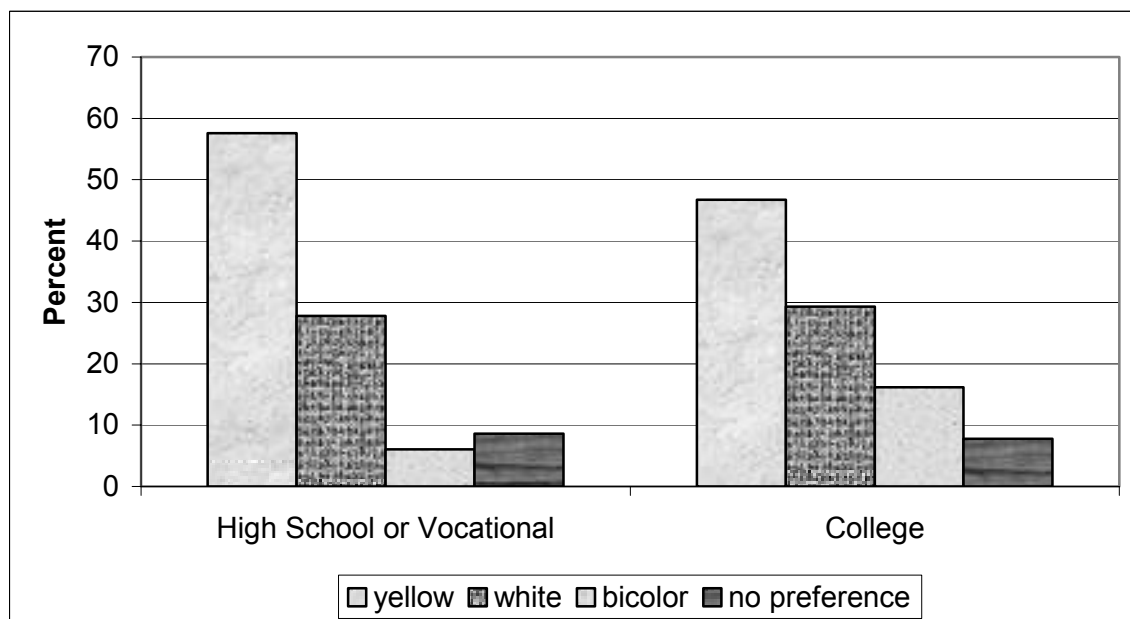


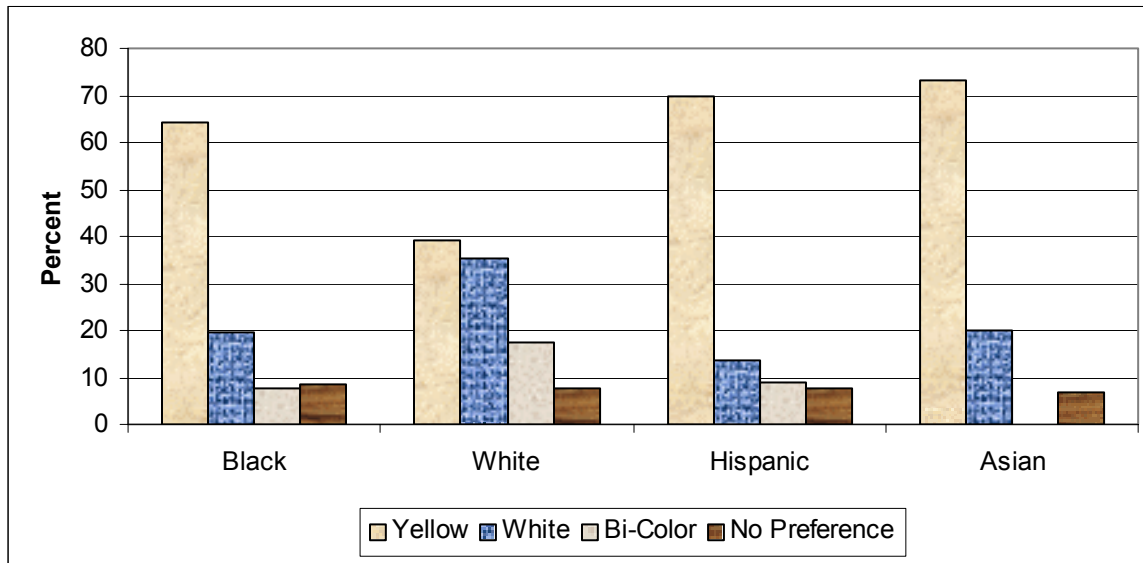
Table 121. Respondents' Sweet Corn Color Preference, by Race and Ethnicity.

Respondents Race ^a	Sweet Corn Color Preference							
	Yellow		White		Bicolor		No Preference	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Black, Non-Hispanic	121	64.4	37	19.7	14	7.4	16	8.5
White, Non-Hispanic	156	39.2	141	35.4	70	17.6	31	7.8
Hispanic, all races	46	69.7	9	13.6	6	9.1	5	7.6
Asian	11	73.3	3	20.0	0	0.0	1	6.7
Totals	334	50.1	190	28.5	90	13.5	53	7.9

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

Figure 6. Respondents' Sweet Corn Color Preference, by Race and Ethnicity.



Seasonality of Sweet Corn Consumption

Although slightly over two-thirds of all households buy sweet corn at some time during the year, examination of purchases on a seasonal basis reveals drastic intra-seasonal differences. For example, during the summer months, nearly all of the sweet corn purchasing households buy it (97.5 percent). However, during the winter, only 36.5 percent of the households reported buying sweet corn. In the spring months, the percentage of households buying it increases to just over 70 percent, and in the fall, about half of the fresh sweet corn purchasing households buy the product (Figure 7, Table 122).

Figure 7. Percent Buying Sweet Corn by Season, All Respondents.

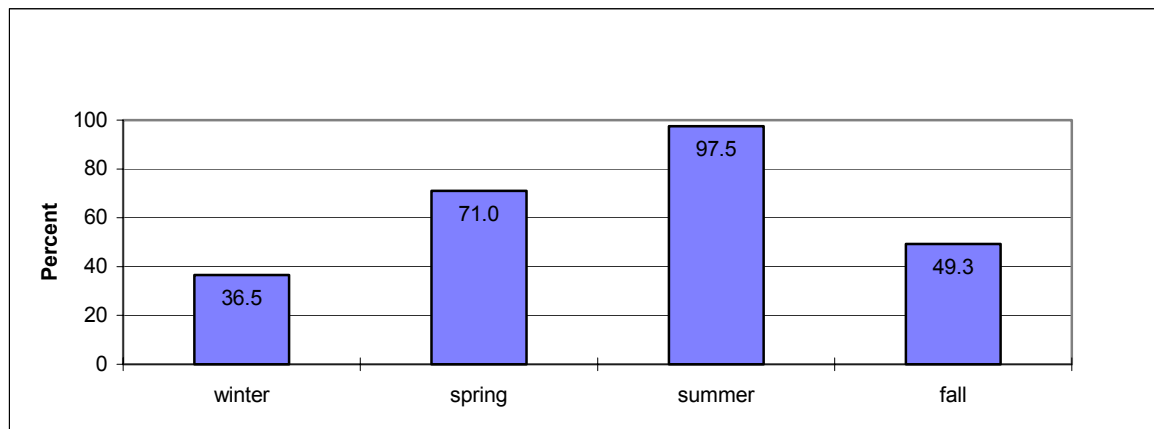


Table 122. Percent of All Sweet Corn Purchasers Buying the Product, by Season.

Season	Percent Buying Sweet Corn
	Percent ^a
Winter	36.5
Spring	71.0
Summer	97.4
Fall	49.3

^a Percentages are based on the following numbers of observations: Winter, 668; Spring, 672; Summer, 677; and Fall, 661.

Respondents in sweet corn consuming households were queried as to why they bought sweet corn in the winter, spring and fall seasons, and the reasons given were quite similar over all three seasons. “Good taste” was by far the most common reason, cited by just over half all purchasers in the winter and spring seasons, and just under 60 percent in the fall (Figure 8, Table 123).

Figure 8. Major Reasons Given for Buying Sweet Corn, by Season.

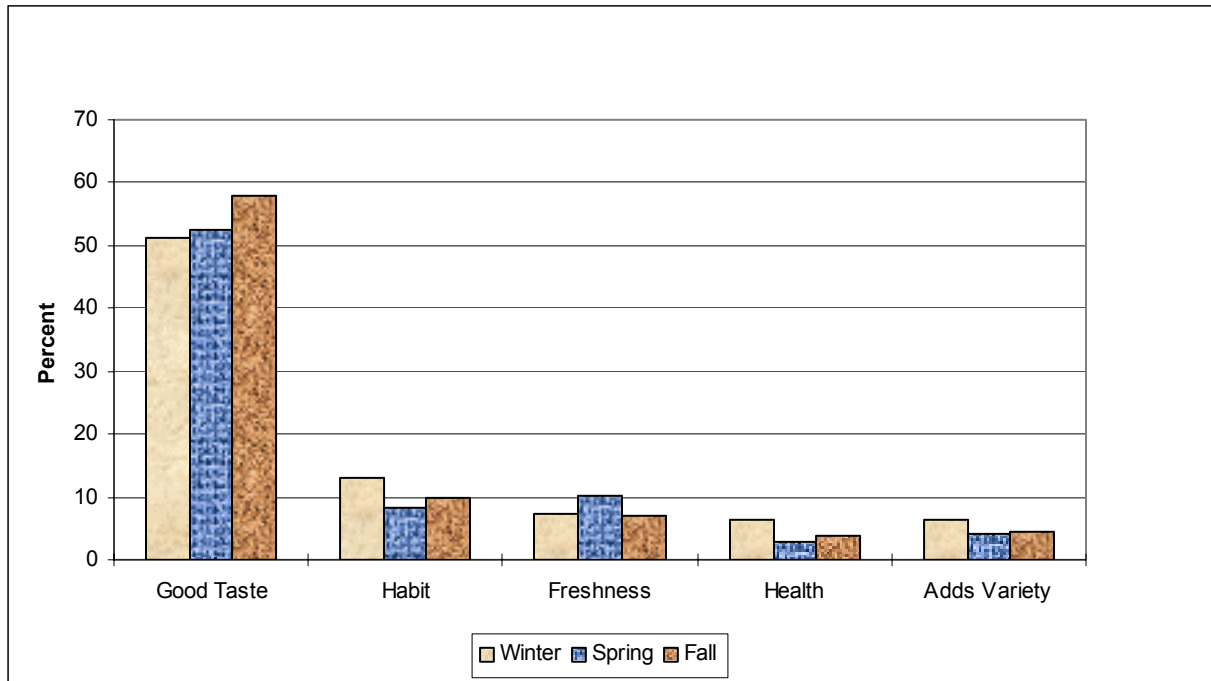


Table 123. Reasons Given For Buying Sweet Corn.

Reason	Winter ^a		Spring ^b		Fall ^c	
	(N)	(percent)	(N)	(percent)	(N)	(percent)
Good Taste	121	51.3	245	52.6	182	57.8
Habit	31	13.1	39	8.4	31	9.8
Freshness	17	7.2	48	10.3	22	7.0
Adds Variety	15	6.4	19	4.1	14	4.4
Health Reasons	15	6.4	14	3.0	12	3.8
Used in Recipes	8	3.4	18	3.9	9	2.9
Low Price	4	1.7	10	2.2	4	1.3
Availability	2	0.9	7	1.5	3	1.0
Appealing Color	1	0.4	8	1.7	6	1.9
Good Smell	1	0.4	2	0.4	1	0.3
Tender	1	0.4	4	0.9	1	0.3
Advertising	0	0.0	1	0.2	1	0.3
Miscellaneous	20	8.5	50	10.7	28	8.9

^aThe number of respondents for winter is 201.

^bThe number of respondents for spring is 387.

^cThe number of respondents for fall is 272.

“Habit” was the second most mentioned reason, given by 8 to 13 percent, depending on the season. “Freshness” was the third most frequent response, given by approximately 7 to 10 percent of all respondents. “Adds variety” and health/nutrition reasons were cited by similar numbers of respondents, approximately 3 to 6 percent of the sweet corn buying households in the various seasons. About 3 or 4 percent of respondents indicated that they bought fresh sweet corn because they needed it for specific recipes. “Low price” was the reason by about 2 percent of respondents in the winter, spring and fall seasons, and “availability” was mentioned by a few, about one percent. Very small numbers cited specific physical attributes such as appealing color, good smell, and tenderness, and only two respondents mentioned advertising as a reason for buying fresh sweet corn (Table 123).

While it is important to understand why people buy sweet corn during Southern SuperSweet’s prime marketing seasons, it is even more important to identify those

reasons why some consumers do not. Respondents from all households that said they did not buy fresh sweet corn during the winter, spring and fall seasons were asked for the “main reason” why they did not buy. The overwhelming majority said that it was not available where they usually shop for produce. Nearly 70 percent of the winter “non-buyers” cited lack of availability, as compared to about 57 percent of the spring non-buyers and 63 percent of the fall non-buyers (Figure 9, Table 124).

Figure 9. Major Reasons Given for Not Buying Sweet Corn, by Season.

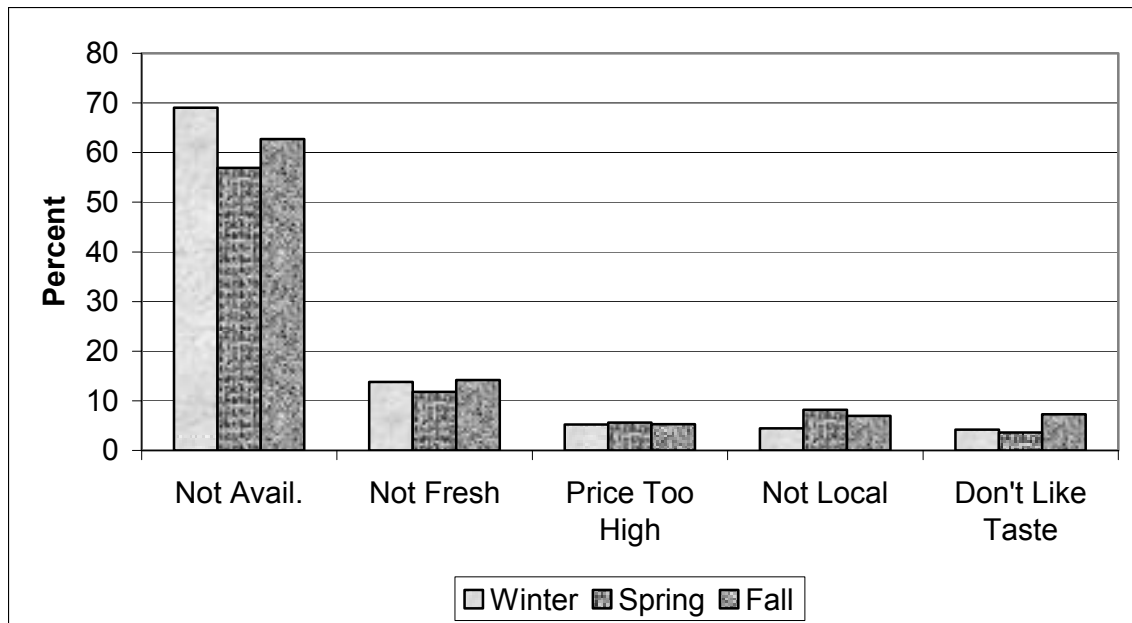


Table 124. Reasons Given for Not Purchasing Sweet Corn, by Season.

Reason for Not Purchasing	Winter ^a		Spring ^b		Fall ^c	
	(N)	(percent)	(N)	(percent)	(N)	(percent)
Not Available	265	69.0	111	56.9	190	62.7
Not Fresh	53	13.8	23	11.8	43	14.2
Price Too High	20	5.2	11	5.6	16	5.3
Not Local	17	4.4	16	8.2	21	6.9
Don't Like Taste	16	4.2	7	3.6	22	7.3
Prep Time	3	0.8	3	1.5	4	1.3
Health, Diet	3	0.8	0	0.0	0	0.0
Texture, Starchy	2	0.5	3	1.5	4	1.3
Goes Bad	2	0.5	4	2.1	2	0.7
Too Messy	1	0.3	0	0.0	0	0.0
Pack Too Large	1	0.3	0	0.0	1	0.3
Damaged	1	0.3	0	0.0	0	0.0

^aThe number of respondents for winter is 384.

^bThe number of respondents for spring is 161.

^cThe number of respondents for fall is 299.

“Lack of freshness” was the second most frequent reason given, mentioned by about 12 to 14 percent of all non-buyers. High prices were the third most frequent reason, given by about 5 percent of the non-buyers. “Not locally grown” and “Do not like taste” were the next most important reasons cited for not buying winter, spring, and fall sweet corn, mentioned by 4 to 8 percent of the respondents. Other reasons, given by extremely small numbers of respondents, included preparation time, diet/health concerns, short shelf life, “too messy”, “packages too large”, and damaged product (Table 124). It is interesting to note that a preference for outdoor cooking/grilling, common in good weather, did not emerge as a significant factor.

Seasonality of purchases was also examined for each city in the sample. There were statistically significant differences among cities in sweet corn purchases in the winter, spring, and fall seasons, but not during the summer. The percentages of sweet corn purchasing households was extremely high in the summer, and very similar, ranging

from 96.6 percent in Chicago to 98.6 in both Boston and Philadelphia. Winter purchase behavior was similar for Dallas and Philadelphia, with 37.5 and 38.2 percent of sweet corn purchasing households buying during this period, respectively. Atlanta had the highest purchase rate, with nearly 60 percent of households buying in the winter. Chicago and Boston had the lowest rates, with only 26.7 and 24.5 percent purchasing (Figure 10, Table 125).

Figure 10. Percent of Sweet Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by City.

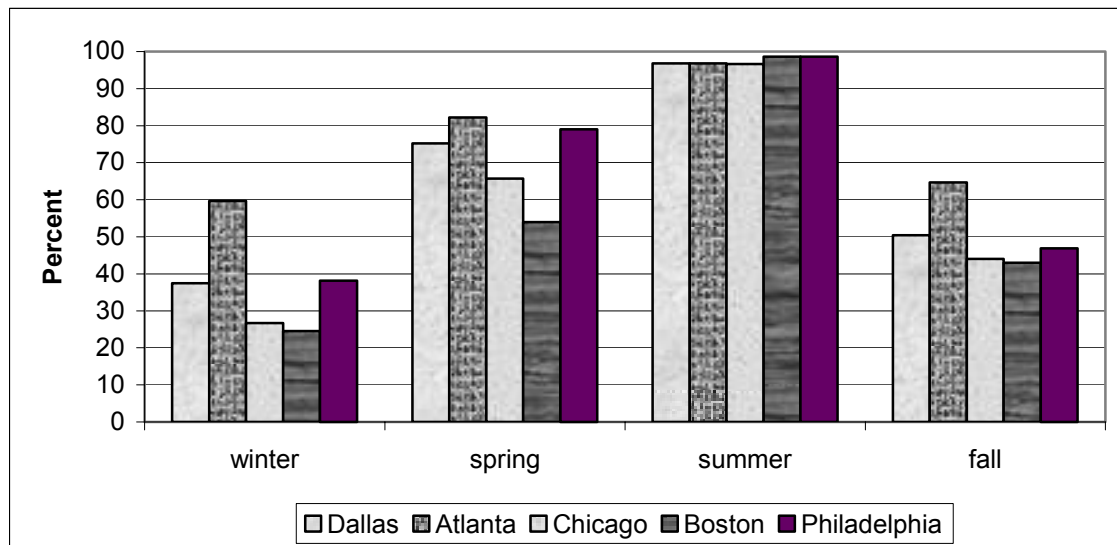


Table 125. Percent of Sweet Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by City.

Season	Dallas	Atlanta	Chicago	Boston	Philadelphia	χ^2 Probability
Winter	37.5	59.7	26.7	24.5	38.2	<0.0001
Spring	75.2	82.2	65.7	54.0	79.0	<0.0001
Summer	96.8	96.8	96.6	98.6	98.6	0.6598
Fall	50.4	64.7	44.0	43.0	46.9	0.0038

Purchase rates by sweet corn using households during the spring and fall seasons in the various cities showed the same general “city” pattern as appears in the winter: Atlanta had the highest percentage of sweet corn using households, followed by Dallas and Philadelphia. Chicago and Boston had the lowest percentages of households buying sweet corn in the spring and fall as well as in the winter. One possible explanation is the weather factor: consumers in all cities tend to associate sweet corn with summer, or at least good weather, and Chicago and Boston are likely to have the worst weather of all the sample cities, not only in the winter, but in the spring and fall as well.

Seasonality of sweet corn purchases does not appear to be strongly related to household income. Chi-square analyses did not reveal any statistically significant relationships between the proportions of households buying sweet corn in the winter, spring and fall seasons and reported household income levels (Figure 11, Table 126). Only in summer was there a statistically significant relationship; extremely high proportions of the higher income groups bought sweet corn in the summer, but the lowest income group, i.e. households with total income less than \$20,000 per year, had the lowest purchase rate, 92.6 percent. This lower rate may reflect lack of transportation mobility, which may not allow the lowest income households to patronize farmers’ markets and other open-air venues. Also, it is likely that more affluent households have greater access to “green markets” and supermarkets.

Figure 11. Percent of Sweet Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by Income Level.

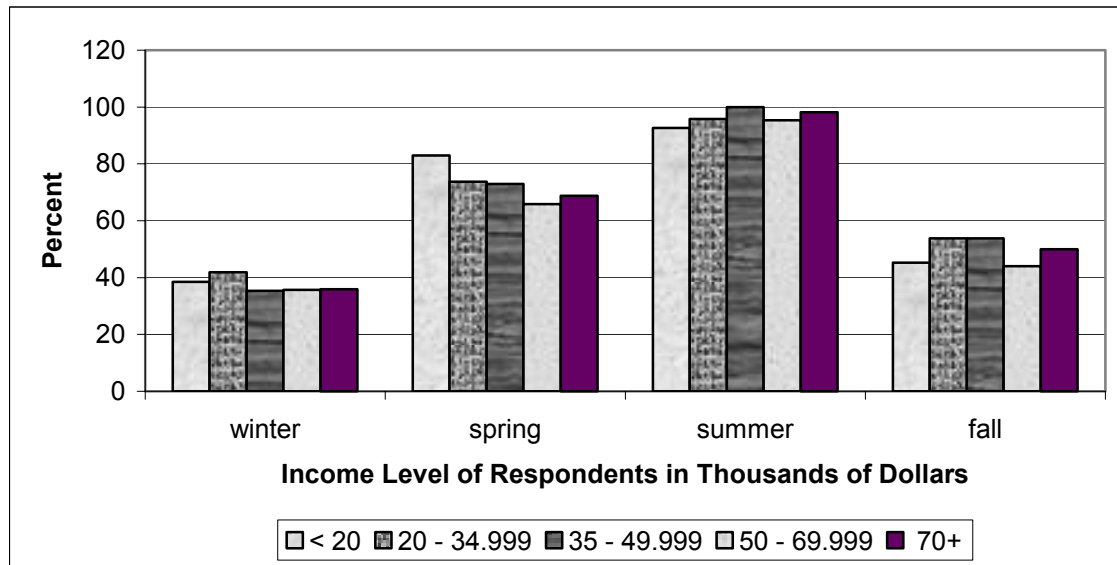


Table 126. Percent of Sweet Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by Income Level.

Season	< 20K	20 – 34,999K	35 – 49,999K	50 – 69,999K	70K+	χ^2 Probability
Winter	38.5	41.9	35.3	35.7	35.9	0.8625
Spring	83.0	73.7	72.9	65.9	68.8	0.2221
Summer	92.6	95.8	100.0	95.3	98.2	0.0432
Fall	45.3	53.8	53.8	44.0	50.0	0.5782

There appeared to be statistically significant differences in the purchase rates by educational levels in the winter and spring seasons. Surprisingly, the percentages of respondents in the “college” category (those with some college credit or college graduates) had lower purchase rates than those with high school or vocational school attainment. For example, in the winter, 43 percent of the lower educational level respondents reported buying fresh sweet corn, as compared to only 33.5 percent of those in the higher category. In the spring, the same pattern prevailed, with 80.1 of the lower category buying sweet corn and only 67.3 percent of the “college” category buying the

product. There were no statistically significant difference in purchase rates between the two groups in summer or fall (Figure 12, Table 127).

Figure 12. Percent of Sweet Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by Education Level.

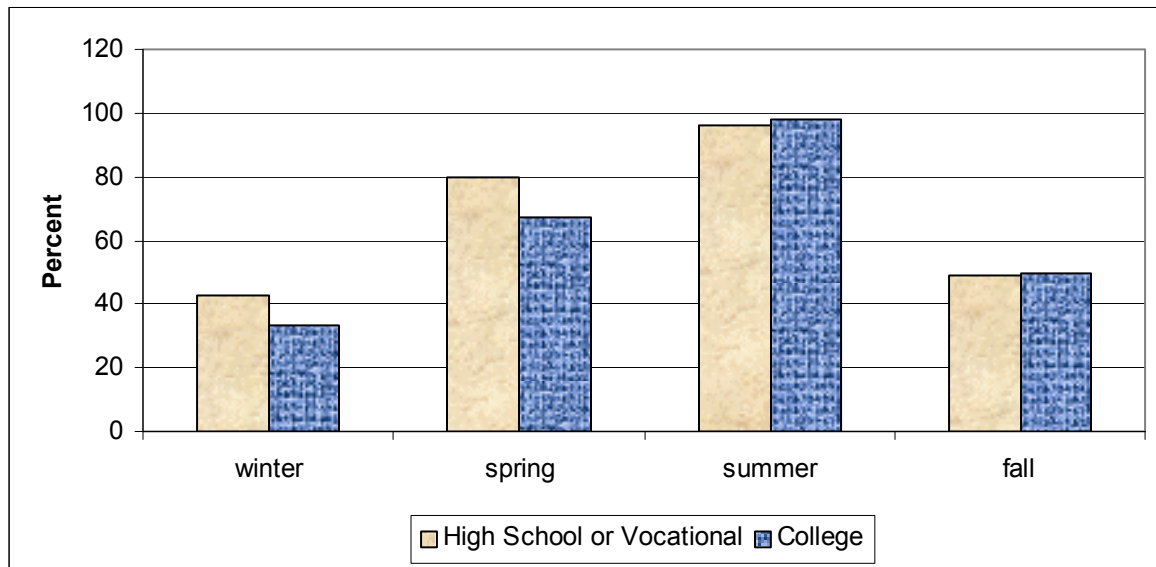


Table 127. Percent of Sweet Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by Education Level.

Season	High School or Vocational		College		χ^2 Probability
	(N)	(Percent)	(N)	(Percent)	
Winter	193	43.0	468	33.5	0.0215
Spring	191	80.1	474	67.3	0.0010
Summer	192	96.4	478	97.9	0.2475
Fall	189	49.2	466	49.4	0.9723

Examination of seasonal purchase behavior by race and ethnicity revealed statistically significant and consistent differences. In the winter, approximately half of the black non-Hispanics and half of the Hispanic respondents said they purchased sweet corn, compared with only 28 percent of the white non-Hispanics and one-third of the Asian respondents. In the spring, about 85 percent of the blacks and 83 percent of the

Hispanics purchased sweet corn, compared with only 63 percent of the whites and about 53 percent of the Asians. The fall showed the same general pattern, with 60 percent of the blacks, 55 percent of the Hispanics, 45 percent of the whites, and 40 percent of the Asians buying fresh sweet corn. Summer was the only season when whites had a higher purchase rate than blacks or Hispanics (Figure 13, Table 128).

Figure 13. Percent of Sweet Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by Race and Ethnicity.

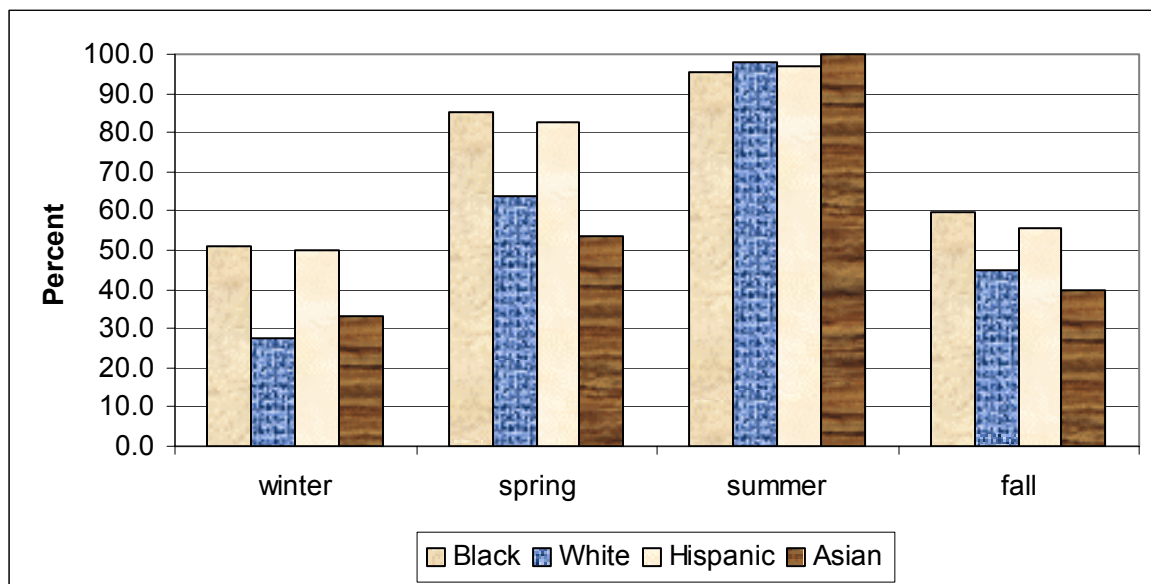


Table 128 . Percent of Corn-Buyers Purchasing Corn in Winter, Spring, Summer and Fall, by Race and Ethnicity.

Season	Black	White	Hispanic	Asian	χ^2 Probability
Winter	51.1	27.8	50.0	33.3	<0.0001
Spring	85.3	63.8	82.8	53.3	<0.0001
Summer	95.5	98.2	96.9	100.0	0.8617
Fall	59.5	44.7	55.4	40.0	0.0001

Consumers' Evaluation of Packaging Type, Shucking Location and Refrigeration

Fresh sweet corn packaging type preferences. Boston and Dallas account for the large variation of consumer preferences for loose versus pre-packed, fully-shucked sweet corn packaging formats (Table 129). Dallas has the lowest preference for loose product form, at just below 61 percent, and the highest partiality, 29 percent, for pre-packed completely shucked sweet corn. Boston respondents expressed an 85 percent preference for loose corn, and a mere seven percent purchased fully shucked and pre-wrapped product. Overall, nine percent of respondents across cities desired pre-packed, partially shucked product.

Table 129. Preferred Type of Packaging, by City.

City ^a	-----Type of Packaging -----					
	Loose		Pre-Pack, Partially Shucked		Pre-Pack, Fully Shucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	75	60.5	13	10.5	36	29.0
Atlanta	91	72.8	12	9.6	22	17.6
Chicago	112	76.2	12	8.2	23	15.6
Boston	116	84.7	11	8.0	10	7.3
Philadelphia	110	78.0	14	9.9	17	12.1
Totals	504	74.8	62	9.2	108	16.0

^a Chi-square probability = 0.0006.

^b Horizontal percentages may not total to 100.0 due to rounding.

Surprisingly, respondents' race and ethnic background described the largest variation in range of all the packaging type categories, with a greater than 30 point spread between Asian preferences (53 percent) and white, non-Hispanic (nearly 85 percent) purchases of loose corn (Table 130). The Asian category depicted the largest number of purchases of fully shucked, pre-packed sweet corn with 40 percent of total sales for this racial group. Hispanic consumers comprised the largest group, preferring partially shucked, pre-packed sweet corn.

Table 130. Preferred Type of Packaging, by Respondents' Race and Ethnicity.

Race of Respondent ^a	-----Type of Packaging -----					
	Loose		Pre-Pack, Partially Shucked		Pre-Pack, Fully Shucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Black, Non-Hispanic	110	59.8	22	12.0	52	28.3
White, Non-Hispanic	330	84.4	27	6.9	34	8.7
Hispanic, all races	37	59.7	11	17.7	14	22.6
Asian	8	53.3	1	6.7	6	40.0
Totals	485	74.4	61	9.4	106	16.3

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

Those respondents in the college category depicted the highest percentage preference for loose sweet corn, at almost 79 percent, and conversely the lowest interest in pre-packed, fully-shucked offerings at eleven percent (Table 131). The high school consumer group showed a much stronger inclination towards purchases of pre-packed, fully shucked produce, at 29 percent.

Table 131. Preferred Type of Packaging, by Level of Education.

Education Level ^a	-----Type of Packaging -----					
	Loose		Pre-Pack, Partially Shucked		Pre-Pack, Fully Shucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
High School, or Vocational	122	63.9	14	7.3	55	28.8
College	375	78.8	48	10.1	53	11.1
Totals	497	74.5	62	9.3	108	16.2

^a Chi-square probability = <0.0001.

^b Horizontal percentages may not total to 100.0 due to rounding.

Income levels similarly affected package selection between loose and fully shucked, pre-packed sweet corn (Table 132). For the loose sweet corn, range extremes of 62 to 86 percent were demonstrated by the \$20 to \$34.9 K group and the \$50 to \$69.9K groups, respectively. Fully shucked, pre-packed preferences were dominated by the under \$20K category, representing over 28 percent of these consumers.

Table 132. Preferred Type of Packaging, by Income Level.

Income Level ^a	-----Type of Packaging -----					
	Loose		Pre-Pack, Partially Shucked		Pre-Pack, Fully Shucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Under \$20,000	34	64.1	4	7.6	15	28.3
\$20,000 - \$34,999	59	62.1	14	14.7	22	23.2
\$35,000 - \$49,999	81	67.5	13	10.8	26	21.7
\$50,000 - \$69,999	75	86.2	6	6.9	6	6.9
\$70,000 and Above	139	81.3	12	7.0	20	11.7
Totals	388	73.8	49	9.3	89	16.9

^a Chi-square probability = 0.0007.

^b Horizontal percentages may not total to 100.0 due to rounding.

The age categories showed minimal variation for packaging types, with an overall preference of nearly 74 percent for loose corn, 17 percent specifying pre-packed, fully shucked product, and almost ten percent of sales represented by the pre-packed, partially shucked option (Table 133).

Table 133. Preferred Type of Packaging, by Age Category.

Age of Respondent ^a	-----Type of Packaging -----					
	Loose		Pre-Pack, Partially Shucked		Pre-Pack, Fully Shucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
65 and Older	63	73.3	5	5.8	18	20.9
50 – 64	102	75.0	7	5.1	27	19.8
35 – 49	155	76.0	22	10.8	27	13.2
18 – 34	145	70.0	27	13.0	35	16.9
Totals	465	73.5	61	9.6	107	16.9

^a Chi-square probability = 0.1009.

^b Horizontal percentages may not total to 100.0 due to rounding.

The presence of children under 18 in the respondents' households had the effects of lowering preference for loose corn (59 percent) and representing the highest affinity for pre-packed, fully shucked product (25 percent) as the number of kids reached three or

more (Table 134). Larger number of children in the home also led to the highest percentage demand for pre-packed, partially shucked sweet corn, nearly 16 percent.

Table 134. Preferred Type of Packaging, by Number of Children in the Sample Households.

Number of Children Under 18 ^a	-----Type of Packaging -----					
	Loose		Pre-Pack, Partially Shucked		Pre-Pack, Fully Shucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
0	301	78.6	30	7.8	52	13.6
1 – 2	125	73.5	16	9.4	29	17.1
3 or More	38	59.4	10	15.6	16	25.0
Totals	464	75.2	56	9.1	97	15.7

^a Chi-square probability = 0.0234.

^b Horizontal percentages may not total to 100.0 due to rounding.

On the whole, gender differences did not seem to affect consumer choice of packaging styles, with the majority (75 percent) choosing loose sweet corn, 16 percent selecting pre-packed, fully shucked, and the remaining nine percent purchasing the pre-packed, partially shucked product (Table 135). Packaging preferences between males and females were not statistically significant.

Table 135. Preferred Type of Packaging, by Gender.

Gender ^a	-----Type of Packaging -----					
	Loose		Pre-Pack, Partially Shucked		Pre-Pack, Fully Shucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Male	175	77.8	19	8.4	31	13.8
Female	329	73.3	43	9.6	77	17.1
Totals	504	74.8	62	9.2	108	16.0

^a Chi-square probability = 0.4320.

^b Horizontal percentages may not total to 100.0 due to rounding.

Fresh sweet corn shucking location preferences. Chicago and Dallas represent the range limits, with nearly 79 percent and over 93 percent, respectively, preferring to shuck sweet corn in their own homes (Table 136). On average, only 17 percent of respondents

expressed an interest in shucking the product in the store, with the largest percentages of these living in Chicago (21percent).

Table 136. Preferred Location to Shuck Sweet Corn, by City.

City ^a	Preferred Location for Shucking			
	In Store		At Home	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	5	6.8	68	93.2
Atlanta	13	14.6	76	85.4
Chicago	24	21.4	88	78.6
Boston	22	19.5	91	80.5
Philadelphia	20	18.3	89	81.6
Totals ^b	84	16.9	412	83.1

^a Chi-square probability = 0.0953.

^b Horizontal percentages may not total to 100.0 due to rounding.

Race and ethnic groups showed significant differences in desirability of in-store shucking (Table 137). Asian customers were at the high end, with nearly 43 percent, and non-Hispanic whites represent the least likely group to shuck in-store, with only twelve percent.

Table 137. Preferred Location to Shuck Sweet Corn, by Race and Ethnicity.

Race/Ethnicity	Preferred Location for Shucking			
	In Store		At Home	
	(N)	(Percent) ^a	(N)	(Percent) ^a
Black, Non-Hispanic	24	21.8	86	78.2
White, Non-Hispanic	40	12.3	285	87.7
Hispanic, all races	10	27.0	27	73.0
Asian	3	42.9	4	57.1
Totals	77	16.1	402	83.9

^a Chi-square probability = 0.0044.

^b Horizontal percentages may not total to 100.0 due to rounding.

There was not a statistically significant difference in the preferred shucking location by educational level or by city (Table 138).

Table 138. Preferred Location to Shuck Sweet Corn, by Level of Education.

Education Level ^a	Preferred Location for Shucking			
	In Store		At Home	
	(N)	(Percent) ^b	(N)	(Percent) ^b
High School, or Vocational	15	12.4	106	87.6
College	69	18.8	299	81.2
Totals	84	17.1	405	82.8

^a Chi-square probability = 0.1080.

^b Horizontal percentages may not total to 100.0 due to rounding.

Sweet corn consumers 65 years of age and up are least likely (10 percent) to prefer in-store shucking areas (Table 139). On average, 84 percent of all age groups responded preferred to shuck their sweet corn at home. About 21 percent of the age 50 to 64 respondents preferred to shuck in-store; however, these differences were not statistically significant.

Table 139. Preferred Location to Shuck Sweet Corn, by Age Category.

Age of Respondent ^a	Preferred Location for Shucking			
	In Store		At Home	
	(N)	(Percent) ^b	(N)	(Percent) ^b
65 and Older	6	9.5	57	90.5
50 – 64	20	20.6	77	79.4
35 – 49	26	16.9	128	83.1
18 – 34	23	16.1	120	83.9
Totals	75	16.4	382	83.6

^a Chi-square probability = 0.3252.

^b Horizontal percentages may not total to 100.0 due to rounding.

Expressed preferences for in-store versus at-home shucking were not statistically significant for various income levels, households with or without children, nor for men and women shoppers.

Fresh sweet corn refrigeration preferences. Considerable variation across cities was observed in the range of respondents' preferences for purchasing refrigerated sweet corn from retail outlets, from Boston's low of 20 percent, to Dallas' high of 39 percent

(Table 140). The majority of consumers across cities, 62 percent, preferred to obtain unrefrigerated sweet corn, with Dallas consumers registering a 50 percent preference and Bostonians preferring nearly 73 percent of sweet corn from unrefrigerated locations.

Table 140. Respondents' Preference for Refrigerated or Unrefrigerated Sweet Corn, by City.

City ^a	-----Preference-----					
	Refrigerated		Unrefrigerated		Don't Know	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	50	39.4	64	50.4	13	10.2
Atlanta	51	38.6	67	50.8	14	10.6
Chicago	34	23.0	99	66.9	15	10.1
Boston	28	19.5	104	72.7	11	7.7
Philadelphia	43	29.7	94	64.8	8	5.5
Totals	206	29.6	428	61.6	61	8.8

^a Chi-square probability = 0.0008.

^b Horizontal percentages may not total to 100.0 due to rounding.

Preferences for refrigerated sweet corn purchases varied the most across racial and ethnic groups, with nearly 42 percent of non-Hispanic blacks and only 24 percent of non-Hispanic whites indicating this choice (Table 141). Asian groups expressed the largest preference for unrefrigerated sweet corn, nearly 67 percent.

Table 141. Preference for Refrigerated or Unrefrigerated Sweet Corn, by Race and Ethnicity.

Race of Respondent ^a	-----Preference-----					
	Refrigerated		Unrefrigerated		Don't Know	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Black, Non-Hispanic	78	41.7	100	53.5	9	4.8
White, Non-Hispanic	97	24.2	259	64.6	45	11.2
Hispanic, all races	19	28.8	40	60.6	7	10.6
Asian	5	33.3	10	66.7	0	0.0
Totals	199	29.7	409	61.1	61	9.1

^a Chi-square probability = 0.0007.

^b Horizontal percentages may not total to 100.0 due to rounding.

Nearly two-thirds of college educated sweet corn buyers (64 percent) choose unrefrigerated sweet corn at specified retail outlets, compared with 55 percent of the high school category (Table 142). Almost nine percent of all education levels were undecided as to which they preferred.

Table 142. Respondents' Preference for Refrigerated or Unrefrigerated Sweet Corn, by Level of Education.

Education Level ^a	-----Preference-----					
	Refrigerated		Unrefrigerated		Don't Know	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
High School, or Vocational	70	35.3	109	55.0	19	9.6
College	133	27.1	315	64.3	42	8.6
Totals	203	29.5	424	61.6	61	8.9

^a Chi-square probability = 0.0692.

^b Horizontal percentages may not total to 100.0 due to rounding.

The lowest preference, less than 24 percent, for refrigerated sweet corn came from those earning less than \$20K annually, while those in the \$35 to \$49.9K group exhibited almost 40 percent of sweet corn purchases in refrigerated form (Table 143). The largest preference for unrefrigerated sweet corn appeared in the \$50 to \$69.9K income group, with responses totaling nearly 69 percent. There were no statistically significant differences in refrigerated versus unrefrigerated corn preferences between age groups, presence of children in the household, or gender of the shopper.

Table 143. Respondents' Preference for Refrigerated or Unrefrigerated Sweet Corn, by Income Level.

Income Level ^a	-----Preference-----					
	Refrigerated		Unrefrigerated		Don't Know	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Under \$20,000	13	23.6	35	63.6	7	12.7
\$20,000 - \$34,999	37	38.5	53	55.2	6	6.2
\$35,000 - \$49,999	48	39.7	68	56.2	5	4.1
\$50,000 - \$69,999	24	27.0	61	68.5	4	4.5
\$70,000 and Above	43	24.6	115	65.7	17	9.7
Totals	165	30.8	332	61.9	39	7.3

^a Chi-square probability = 0.0270.

^b Horizontal percentages may not total to 100.0 due to rounding.

Other Factors Affecting Sweet Corn Purchases: Store Type and Advertising Exposure

Retail store type. Across cities, the majority (62.2 percent) of respondents acquire sweet corn from local supermarkets (Table 144). Responses ranged from a low of 55 percent in Boston to the high of 66 percent in Dallas. Specialty produce stores are frequented by over 19 percent of Chicagoans, and are the second most common choice among all sweet corn consumers, with an average of nearly 13 percent claiming to visit this retailer type. A surprising 21 percent of Bostonians patronize roadside stands for their sweet corn purchases, which contributes the third place ranking of this venue, accounting for almost 11 percent of total sales. Overall, discount clubs and local farmers represent less than 1 percent of total sweet corn sales.

White non-Hispanics represent the lowest supermarket shopper category, with 58 percent frequenting this retailer type (Table 145). Approximately 76 percent of Hispanics patronize supermarkets for their sweet corn purchases. About 16 percent of non-Hispanic Blacks patronize specialty produce stores for sweet corn purchases,

compared with about twelve percent of White non-Hispanic shoppers. Less than eight percent of Hispanics and seven percent of Asians usually buy sweet corn from specialty stores. Overall, roadside stands account for about ten percent of sweet corn purchases, but a disproportionately large number are White, non-Hispanics (13.4 percent).

About 71 percent of respondents in the under \$20K income group shop for sweet corn in supermarkets, and this type store is somewhat less important for higher income groups. Respondents with higher incomes have a slightly greater tendency to buy sweet corn at specialty produce stores or roadside stands. Nevertheless, supermarkets are by far the most important type of retail outlet for sweet corn (Table 146).

Table 144. Types of Retail Outlets Where Respondents Purchase Sweet Corn, by City.

Type of Retail Outlet ^a	Dallas		Atlanta		Chicago		Boston		Philadelphia		Totals	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Superstore	7	5.5	4	3.0	5	3.4	0	0.0	1	1.4	17	2.4
Discount Club	2	1.6	0	0.0	0	0.0	1	0.7	2	0.7	5	0.7
Supermarket	84	66.1	86	64.6	93	63.3	79	55.2	90	62.1	432	62.2
Small												
Grocery	16	12.6	6	4.5	7	4.8	9	6.3	10	6.9	48	6.9
Specialty												
Produce												
Store	7	5.5	15	11.3	29	19.7	18	12.6	19	13.1	88	12.6
Roadside												
Stand	9	7.1	12	9.0	7	4.8	30	21.0	15	10.3	73	10.5
Farmers												
Market	2	1.6	9	6.8	5	3.4	4	2.8	5	3.4	25	3.6
Local Farmers	0	0.0	1	0.8	1	0.7	2	1.4	3	2.1	7	1.0
	127	100.0	133	100.0	147	100.0	143	100.0	145	100.0	695	100.0

^a The Chi-square probability is not reported because of limited numbers of observations in some cells.

^b Vertical percentages may not total to 100.0 due to rounding.

Table 145. Types of Retail Outlets Where Respondents Purchase Sweet Corn, by Race and Ethnicity.

Type of Retail Outlet	Race									
	Black, Non-Hispanic		White, Non-Hispanic		Hispanic, all races		Asian		Totals	
	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a
Superstore	7	3.7	9	2.2	0	0.0	1	6.7	17	2.5
Discount Club	1	0.5	2	0.5	2	3.1	0	0.0	5	0.8
Supermarket	123	65.8	234	58.2	50	76.9	11	73.3	418	62.5
Small Grocery	11	5.9	31	7.7	3	4.6	1	6.7	46	6.9
Specialty Produce Store	30	16.0	47	11.7	5	7.7	1	6.7	83	12.4
Roadside Stand	9	4.8	54	13.4	5	7.7	0	0.0	68	10.2
Farmers Market	6	3.2	18	4.5	0	0.0	1	6.7	25	3.7
Local Farmers	0	0.0	7	1.7	0	0.0	0	0.0	7	1.0
Totals	187	100.0	402	100.0	65	100.0	15	100.0	669	100.0

^a The Chi-square probability is not reported because of limited numbers of observations in some cells.

^b Vertical percentages may not total to 100.0 due to rounding.

Table 146. Types of Retail Outlets Where Respondents Purchase Fresh Sweet Corn, by Income Level.

Type of Retail Outlet	Income Level										Totals	
	Under \$20,000		\$20,000 - \$34,999		\$35,000 - \$49,999		\$50,000 - \$69,999		\$70,000 and Above			
	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a
Superstore	0	0.0	5	5.3	5	4.1	0	0.0	2	1.1	12	2.2
Discount Club	0	0.0	2	2.1	1	0.8	0	0.0	0	0.0	3	0.6
Supermarket	39	70.9	56	58.9	79	64.7	52	58.4	99	56.6	325	60.6
Small Grocery	4	7.3	6	6.3	7	5.7	8	9.0	15	8.6	40	7.5
Produce Specialty Store	7	12.7	12	12.6	18	14.7	14	15.7	22	12.6	73	13.6
Roadside Stand	3	5.4	8	8.4	9	7.4	11	12.4	25	14.3	56	10.4
Farmers Market	1	1.8	5	5.3	2	1.6	1	1.1	11	6.3	20	3.7
Local Farmers	1	1.8	1	1.0	1	0.8	3	3.4	1	0.6	7	1.3
Totals	55	100.0	95	100.0	122	100.0	89	100.0	175	100.0	536	100.0

^a The Chi-square probability is not reported because of limited numbers of observations in some cells.

^b Vertical percentages may not total to 100.0 due to rounding.

Fresh sweet corn advertising exposures. Only seven percent of all sweet corn buyers had ever received any information about the availability, nutritional qualities, or cooking methods for fresh sweet corn. Of the forty-nine respondents that had obtained information, 30 were influenced by cookbooks, 29 by magazine articles, 22 by family members, and 21 through a news articles. The personal connection between sweet corn consumers and friends, grocers, or farmers were mentioned by 18, 18 and 15 respondents. Television food shows had provided information to 17, or 2.4 percent of sweet corn buyers. Very few respondents mentioned extension services(6), the Internet(5), home economics classes(4), other(4) and trade associations(3). Percentages of total sweet corn buyers reached by all types was found to be very low (Table 147).

Table 147. Sources Used to Obtain Information about Sweet Corn.

Source	Number	Percent of Buyers ^a
Cookbook	30	4.3
Magazine Article	29	4.2
Family Member	22	3.2
Newspaper Article	21	3.0
Friend	18	2.6
Grocer	18	2.6
TV Food Show	17	2.4
Farmer	15	2.2
Extension Service	6	0.9
Internet	5	0.7
Home Econ. Class	4	0.6
Other	4	0.6
Trade Association	3	0.4

^aOnly 49 of 697 buyers (7 percent) had obtained information about the availability, nutritional qualities or cooking methods for sweet corn. Percentages are based upon 697 buyers.

The printed word carried the most value in sweet corn consumers' abilities to recall specific types of promotional materials (Table 148). Using the aided recall approach,

newspaper feature stories and newspaper food advertisements for sweet corn were each recalled by 257, or nearly 37 percent of all sweet corn buyers. Store posters were recalled by 211 responses from a possible 697 sweet corn buyers (30 percent). Television food shows or news stories were recalled by 29 percent of those surveyed, and television commercials were recalled by 21 percent, giving them the fourth and sixth ranking. Magazine ads and stories were recalled by 22 and 15 percent of sweet corn buyers, respectively. Recipe cards were recalled by less than 17 percent of sweet corn buyers. Finally, radio commercials and Internet websites were recollected by about seven and five percent of all consumers, respectively.

Table 148. Aided Recall of Specific Types of Promotional Materials for Sweet Corn.

Type	Number	Percent of Respondents ^a
Newspaper Feature Story	257	36.9
Newspaper Food Ad	257	36.9
Poster in Store	211	30.3
Television	203	29.1
Magazine Ad	153	22.0
TV Commercial	147	21.1
Recipe Cards, Leaflets or Booklets	124	17.8
Magazine Story	106	15.2
Radio Commercial	48	6.9
Internet Web Site	32	4.6

^a Percentages are based upon 697 sweet corn buyers.

The Internet was mentioned by relatively few sweet corn purchasers as a source of information on the availability, nutritional qualities and cooking methods. Even so, it should not be overlooked as a viable educational and promotional tool for sweet corn. A search of the Internet yielded many hits for information on Southern Supersweet Corn. Most were newspaper food stories and recipes that had originated with the Southern Supersweet Corn Council, and had been published by newspapers and linked to various websites touting fresh

produce or cooking information. The consumer survey contained several brief questions about respondents' accessibility to the Internet at home or at work. Overall, nearly three-fourths of all respondents said they could access the Internet at one or both places. As expected, the incidence of Internet availability was associated with income levels. Approximately 43 percent of the lowest income category (under \$20K) had access, compared with about 65 percent in the \$20-\$35K group. In the \$35-\$50K segment, 79 percent had access while over 92 percent of those in the \$50-\$70K were connected. An astounding 94 percent of the households with incomes of \$70K or more had Internet access. Access by race/ethnicity was found to be about 60 percent for Blacks, 72 percent for Hispanics, 80 percent for White non-Hispanics, and 83 percent for Asians. The bottom line is that the vast majority of households now have access to the Internet, and as users become more adept at using this relatively new device, it will become ever easier to educate consumers. A dedicated website for Southern Supersweet corn would provide a centralized location for consumers to find information that could serve to enhance the use of the product.

At-Home Storage of Fresh Sweet Corn

Respondents were asked whether or not they usually ate the fresh sweet corn on the day they purchased it, or if not, how long they stored the corn. If the respondent stored the corn, they were asked where and how the corn was stored. On average, 62.4 percent of the respondents indicated they used sweet corn on the day they purchased it. This number varied significantly by city (Table 149) and race (Table 150).

Table 149. Respondents' Use of Fresh Sweet Corn on the Day of Purchase, by City.

City ^a	Use Sweet Corn on Day of Purchase			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	80	64.0	45	36.0
Atlanta	72	55.0	59	45.0
Chicago	94	63.5	54	36.5
Boston	104	73.2	38	26.8
Philadelphia	81	55.9	64	44.1
Totals ^b	431	62.4	260	37.6

^a Chi-square probability = 0.0110.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 150. Respondents' Use of Fresh Sweet Corn on the Day of Purchase, by Race and Ethnicity.

Race of Respondent ^a	Use Sweet Corn on Day of Purchase			
	Yes		No	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Black, Non-Hispanic	102	54.8	84	45.2
White, Non-Hispanic	265	66.4	134	33.6
Hispanic, all races	41	62.1	25	37.9
Asian	6	40.0	9	60.0
Totals	414	62.2	252	37.8

^a Chi-square probability = 0.0041.

^b Horizontal percentages may not total to 100.0 due to rounding.

Respondents from Boston were most likely to use the corn on the day of purchase (73.2 percent of the time) compared to respondents from Atlanta (55 percent of the time). Additionally, Caucasians and Hispanics were more likely to consume the corn on the same day (approximately 65 percent of the time) compared to Blacks (54 percent) and Asians (40 percent). For the 38 percent of respondents that did not use the corn on the day of purchase, over 81 percent used the corn within three days.

Overall, 84 percent of the respondents indicated they stored fresh sweet corn in the refrigerator at home, 9 percent used the freezer and 7 percent stored corn outside of the refrigerator and freezer (Table 151). This response varied by gender (Table 152), with females more likely to store corn in the refrigerator or freezer (96 percent) than men (88

percent). Approximately 54 percent of the respondents indicated they stored the corn shucked (Table 153). This varied by education level, with respondents with higher levels of education more likely to store the corn unshucked (58 percent) (Table 154) and by race (Table 155), with Caucasians most likely to store the corn unshucked (62 percent).

Table 151. Respondents At Home Storage Preference for Sweet Corn, by City.

City	----- Storage Preference -----					
	Refrigerator		Freezer		Outside Refrigerator	
	(N)	(Percent) ^a	(N)	(Percent) ^a	(N)	(Percent) ^a
Dallas	35	81.4	4	9.3	4	9.3
Atlanta	51	87.9	4	6.9	3	5.2
Chicago	42	79.3	6	11.3	5	9.4
Boston	33	86.8	2	5.3	3	7.9
Philadelphia	54	84.4	8	12.5	2	3.1
Totals	215	84.0	24	9.4	17	6.6

^a Horizontal percentages may not total to 100.0 due to rounding.

Table 152. At Home Storage Preference for Sweet Corn, by Respondents Gender.

Gender ^a	----- Storage Preference -----					
	Refrigerator		Freezer		Outside Refrigerator	
	(N)	(Percent) ^b	(N)	(Percent) ^b	(N)	(Percent) ^b
Male	64	80.0	6	7.5	10	12.5
Female	151	85.8	18	10.23	7	3.98
Totals	215	84.0	24	9.4	17	6.6

^a Chi-square probability = 0.0356.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 153. Respondents' Preference for Shucked or Unshucked Storage of Sweet Corn, by City.

City ^a	Storage Preference			
	Shucked		Unshucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	19	42.2	26	57.8
Atlanta	26	45.6	31	57.8
Chicago	20	38.5	32	61.5
Boston	15	41.7	21	58.3
Philadelphia	35	55.6	28	44.4
Totals ^b	115	45.4	138	54.5

^a Chi-square probability = 0.4037.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 154. Respondents' Preference for Shucked or Unshucked Storage of Sweet Corn, by Level of Education.

Education Level ^a	Storage Preference			
	Shucked		Unshucked	
	(N)	(Percent) ^b	(N)	(Percent) ^b
High School, or Vocational	41	54.0	35	46.0
College	74	42.3	101	57.7
Totals	115	45.8	136	54.2

^a Chi-square probability = 0.0884.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 155. Respondents' Preference for Shucked or Unshucked Storage of Sweet Corn, by Race and Ethnicity.

Race/Ethnicity	Storage Preference			
	Shucked		Unshucked	
	(N)	(Percent) ^a	(N)	(Percent) ^a
Black, Non-Hispanic	43	52.4	39	47.6
White, Non-Hispanic	50	38.2	81	61.8
Hispanic, all races	14	58.3	10	41.7
Asian	5	62.5	3	37.5
Totals	112	45.7	133	54.3

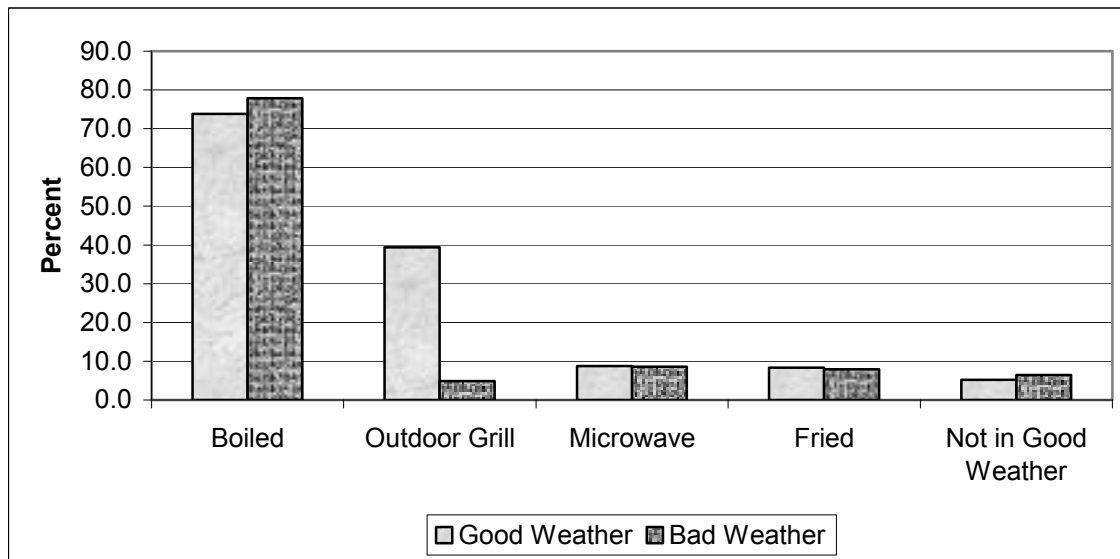
^a Chi-square probability = 0.1088.

^b Horizontal percentages may not total to 100.0 due to rounding.

Cooking Methods for Fresh Sweet Corn

Preparation of the sweet corn varied depending on the weather (Figure 14). In both good and bad weather, the primary method for preparing the corn is boiling, with over 70 percent of the respondents indicating they boil corn in both types of weather. However, in good weather, 40 percent also use the outdoor grill for preparation, where only 5 percent use this method in bad weather. All other methods of cooking accounted for less than 10 percent of the respondents (Figure 14).

Figure 14. Methods of Preparation Used in Good vs Bad Weather.



There was variance in the cooking methods by city (Tables 156 and 157). For example, over 50 percent of the respondents in Chicago indicated they use the outdoor grill in good weather, compared to approximately 35 percent of the respondents in all other cities. Boston and Philadelphia boiled corn more frequently in good weather, approximately 85 percent compared to 65 percent for other cities. Atlanta and Chicago respondents were more likely to fry sweet corn, in both good and bad weather.

Table 156. Preparation Methods Used in Good Weather, by City.

	Dallas		Atlanta		Chicago		Boston		Philadelphia	
	(N)	(percent) ^a	(N)	(percent) ^a	(N)	(percent) ^a	(N)	(percent) ^a	(N)	(percent) ^a
Outdoor Grill	50	39.4	46	34.6	81	54.7	47	32.9	50	34.2
Indoor Grill	3	2.4	4	3.0	1	0.7	4	2.8	2	1.4
Raw	0	0.0	2	1.5	3	2.0	5	3.5	2	1.4
Microwave	14	11.0	12	9.0	17	11.5	11	7.7	7	4.8
Boiled	82	64.6	91	68.4	93	62.8	121	84.6	126	86.3
Baked	5	3.9	8	6.0	3	2.0	3	2.1	1	0.7
Fried	7	5.5	23	17.3	17	11.5	5	3.5	6	4.1
Do Not Prepare	7	5.5	1	0.8	7	4.7	18	12.6	3	2.1
Other	1	0.8	3	2.3	2	1.4	3	2.1	3	2.1
Steamed	5	3.9	4	3.0	1	0.7	5	3.5	2	1.4
Creamed	2	1.6	1	0.8	0	0.0	1	0.7	0	0.0
Broil	0	0.0	0	0.0	0	0.0	0	0.0	1	0.7
Soup/Stew	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

^a Percentages are based upon the following numbers of observations in each city: Dallas, 127, Atlanta, 133, Chicago, 148, Boston, 143, and Philadelphia, 146.

Table 157. Preparation Methods Used in Bad Weather, by City.

	Dallas		Atlanta		Chicago		Boston		Philadelphia	
	(N)	(percent) ^a	(N)	(percent) ^a	(N)	(percent) ^a	(N)	(percent) ^a	(N)	(percent) ^a
Outdoor Grill	6	4.7	10	7.5	6	4.1	8	5.6	4	2.7
Indoor Grill	0	0.0	1	0.8	2	1.4	4	2.8	0	0.0
Raw	2	1.6	1	0.8	0	0.0	4	2.8	0	0.0
Microwave	15	11.8	10	7.5	17	11.5	11	7.7	7	4.8
Boiled	93	73.2	96	72.2	111	75.0	113	79.0	129	88.4
Baked	7	5.5	9	6.8	4	2.7	2	1.4	0	0.0
Fried	7	5.5	21	15.8	18	12.2	3	2.1	6	4.1
Do Not Prepare	9	7.1	4	3.0	8	5.4	19	13.3	5	3.4
Other	0	0.0	3	2.3	2	1.4	1	0.7	3	2.1
Steamed	3	2.4	4	3.0	3	2.0	3	2.1	2	1.4
Creamed	1	0.8	2	1.5	0	0.0	0	0.0	0	0.0
Broil	1	0.8	0	0.0	0	0.0	0	0.0	1	0.7
Soup/Stew	1	0.8	1	0.8	3	2.0	1	0.7	0	0.0

^a Percentages are based upon the following numbers of observations in each city: Dallas, 127, Atlanta, 133, Chicago, 148, Boston, 143, and Philadelphia, 146.

Overall, 90 percent of respondents preferred to serve fresh sweet corn on the cob (Table 158). This also varied by city, with Boston and Philadelphia respondents most likely to serve corn on the cob (approximately 95 percent of the respondents) compared to Atlanta, Dallas, and Chicago (approximately 88 percent). Serving corn on the cob also varied by education, with the higher education group serving corn on the cob more frequently (Table 159), as well as by race (Table 160). Asians were least likely to serve corn on the cob (79 percent) compared to the most likely, Caucasians (94 percent).

Table 158. Respondents' Preference for Serving Fresh Sweet Corn On or Off the Cob, by City.

City ^a	Preference			
	On the Cob		Off the Cob	
	(N)	(Percent) ^b	(N)	(Percent) ^b
Dallas	112	88.9	14	11.1
Atlanta	110	85.9	18	14.1
Chicago	127	88.8	16	11.2
Boston	135	95.7	6	4.3
Philadelphia	137	94.5	8	5.5
Totals ^b	621	90.9	62	9.1

^a Chi-square probability = 0.0219.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 159. Respondents' Preference for Serving Fresh Sweet Corn On or Off the Cob, by Level of Education.

Education Level ^a	Preference			
	On the Cob		Off the Cob	
	(N)	(Percent) ^b	(N)	(Percent) ^b
High School, or Vocational	171	87.2	25	12.8
College	445	92.7	35	7.3
Totals	616	91.1	60	8.9

^a Chi-square probability = 0.0234.

^b Horizontal percentages may not total to 100.0 due to rounding.

Table 160. Respondents' Preference for Serving Fresh Sweet Corn On or Off the Cob, by Race.

Race/Ethnicity	Preference			
	On the Cob		Off the Cob	
	(N)	(Percent) ^a	(N)	(Percent) ^a
Black, Non-Hispanic	155	86.1	25	13.9
White, Non-Hispanic	375	93.7	25	6.3
Hispanic, all races	58	90.6	6	9.4
Asian	11	78.6	3	21.4
Totals	599	91.0	3	21.4

^a Chi-square probability = 0.0087.

^b Horizontal percentages may not total to 100.0 due to rounding.

Fresh sweet corn was most frequently served as a side dish, nearly two-thirds of the time. Fresh sweet corn was also used as a main dish approximately 13 percent of the time and as part of a salad 8 percent of the time.

Complements Served with Fresh Sweet Corn

Respondents were asked if they consumed other foods with sweet corn. Broken into categories, they were asked if they ever ate any meats or other vegetables with sweet corn. 605 respondents indicated what meat and 549 indicated what other vegetables they consumed with sweet corn. For meat, respondents indicated that they ate a variety of meats with sweet corn. Included in the responses were beef, chicken, pork, ribs, seafood (including finfish and shellfish). A small number of respondents indicated that they would consume “any” meat with sweet corn. Figure 15 shows the breakdown of responses by city. Overall, consumption of beef (356 of 605 respondents) and chicken (351 of 605 respondents) were the highest, followed by pork (135 of 605 respondents). The consumption of chicken and pork differed significantly by city, with Atlanta, followed by Philadelphia, responding chicken more frequently than other cities. Dallas, Atlanta, and Chicago all responded pork consumption with sweet corn more frequently than Boston and Philadelphia. When examining these

responses by age (Figure 16), some larger differences are noted. The respondents that indicated they ate pork with sweet corn tended to be in the oldest age group (age 65 and above). Corresponding with this, the two older age groups were more likely to indicate that they would eat any meat with sweet corn. Finally, when examining these responses by race (Figure 17), it can be seen that consumption of chicken and seafood vary significantly by race. Blacks consumed chicken with fresh sweet corn approximately 10-15 percent more frequently than other races. Seafood was consumed least with fresh sweet corn by whites.

Figure 15. Percent of Consumption of Meat with Sweet Corn, by City.

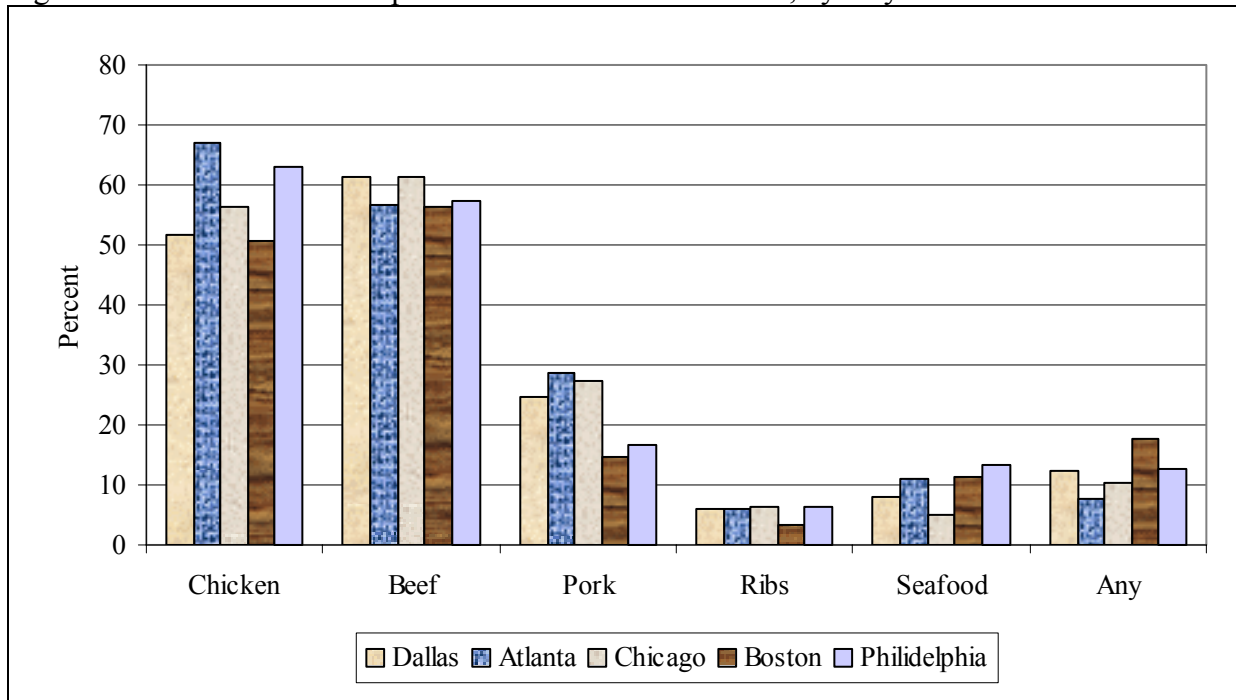


Figure 16. Percent of Consumption of Meat with Sweet Corn, by Age.

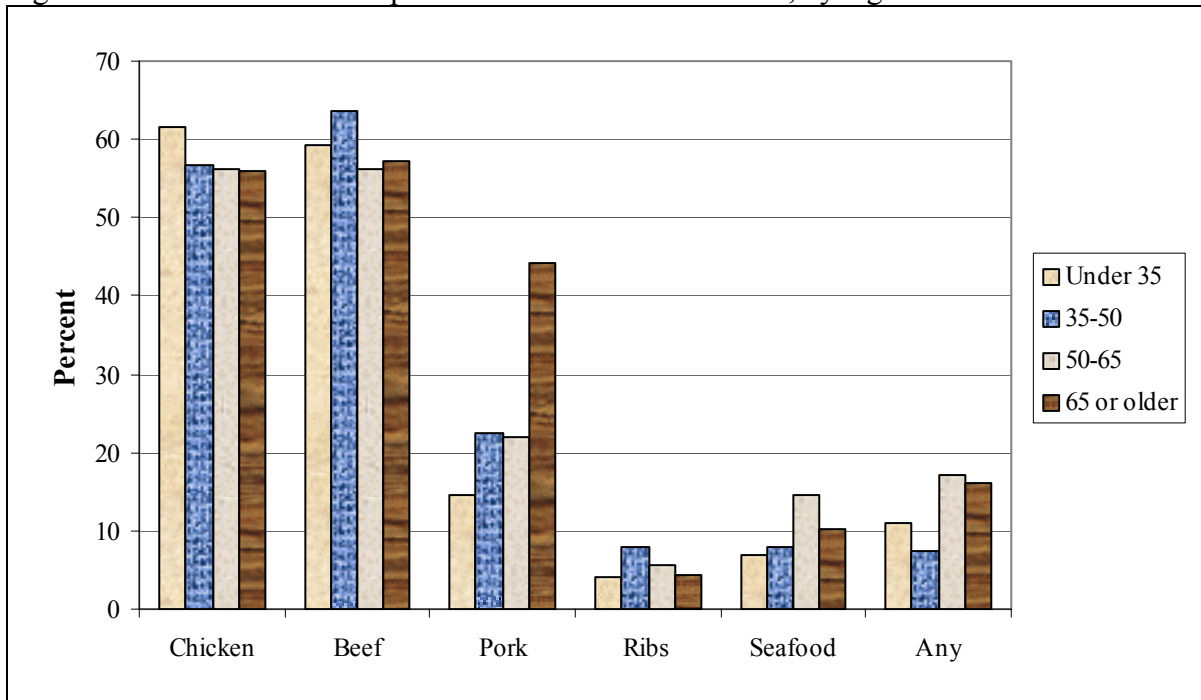
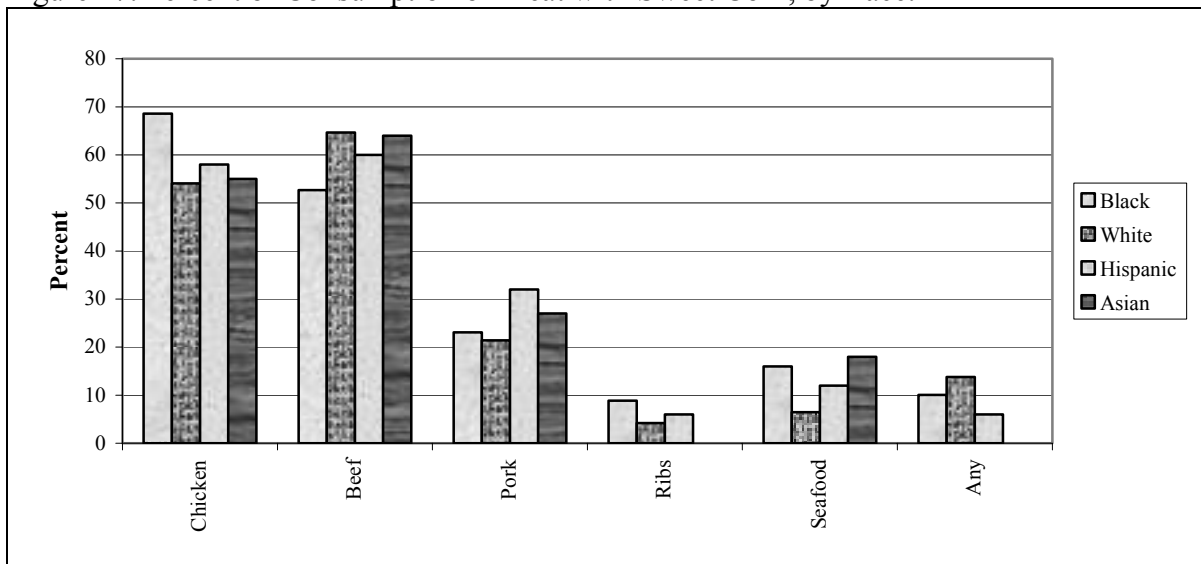


Figure 17. Percent of Consumption of Meat with Sweet Corn, by Race.



For other vegetable consumption, there were many responses. Vegetables were grouped into categories to determine if significant differences existed by city, age, and race. Among those categories were potatoes, broccoli and cauliflower, peas, greens, squash. Two

other categories were created using a variety of answers that were given by respondents. Many respondents indicated that they ate green beans, string beans, lima beans, and other beans with sweet corn. However, respondents also indicated they ate baked beans with sweet corn. Because so many respondents only answered using the word “beans”, all of these answers were combined into one category called beans. Similarly, many respondents answered salad, while others answered lettuce, carrots, tomatoes, and cabbage. These responses were all grouped into a category called salad.

Examining the response by city (Figure 18), it can be seen that significant differences exist in the categories broccoli, beans, and greens by city. Overall, the most common response was salad (198 of 549 respondents), followed by beans (167 of 549 respondents) and potatoes (136 of 549 respondents). Beans varied significantly by city, with Dallas responding beans most frequently, 42.1 percent of the time, where other cities indicated beans approximately 28 percent of the time. Greens varied with most cities indicating consumption approximately 17 percent of the time, except Boston, where consumption of greens was below 2 percent. Broccoli and cauliflower had a similar pattern to greens. Again, consumption by age group (Figure 19) differed significantly. Greens and peas were more commonly eaten by the older age groups where salad was more commonly eaten by the younger age groups. There were many different patterns in other vegetable consumption with fresh sweet corn by race (Figure 20). Beans, peas, greens, and salad all significantly differed by race. Beans were consumed by approximately 40 percent of blacks, 34 percent of Asians and Hispanics, and only 26 percent of whites. Greens followed a similar pattern, consumed by 25 percent of blacks, 16 percent of Hispanics, and only approximately 7 percent of Whites and Asians. Peas were most often consumed by Hispanics (23 percent)

versus a low of 8 percent for Asians. Salad and related vegetables were consumed most often by Whites (41 percent) compared to a low of 31 percent for Blacks.

Figure 18. Percent of Consumption of Other Vegetables with Sweet Corn, by City.

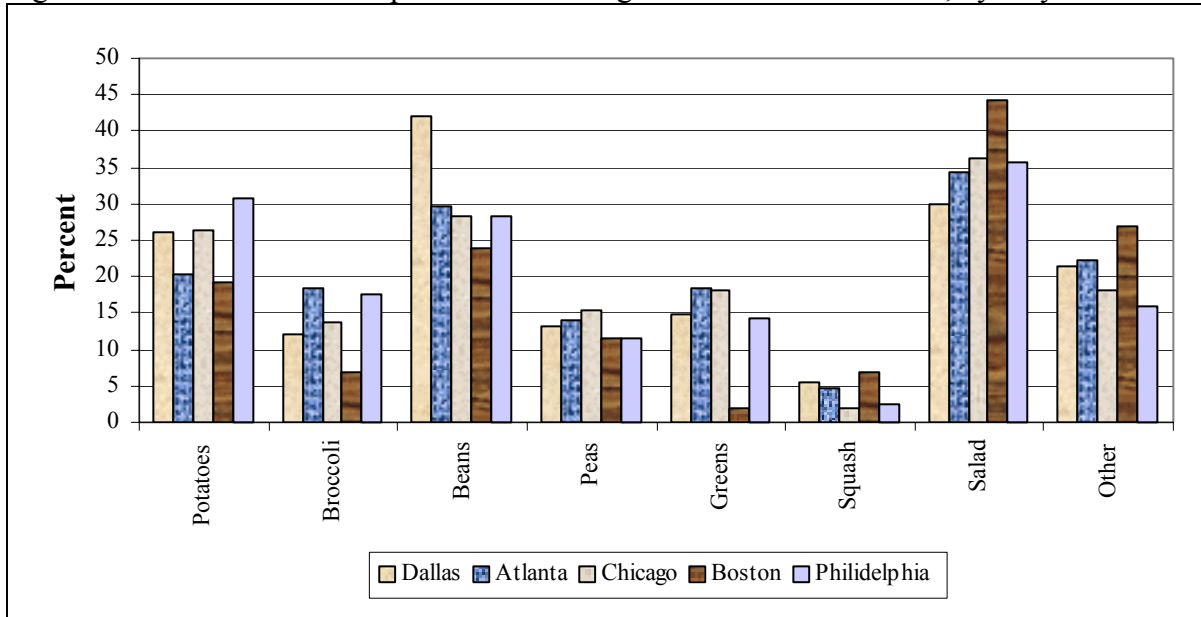


Figure 19. Percent of Consumption of Other Vegetables with Sweet Corn, by Age.

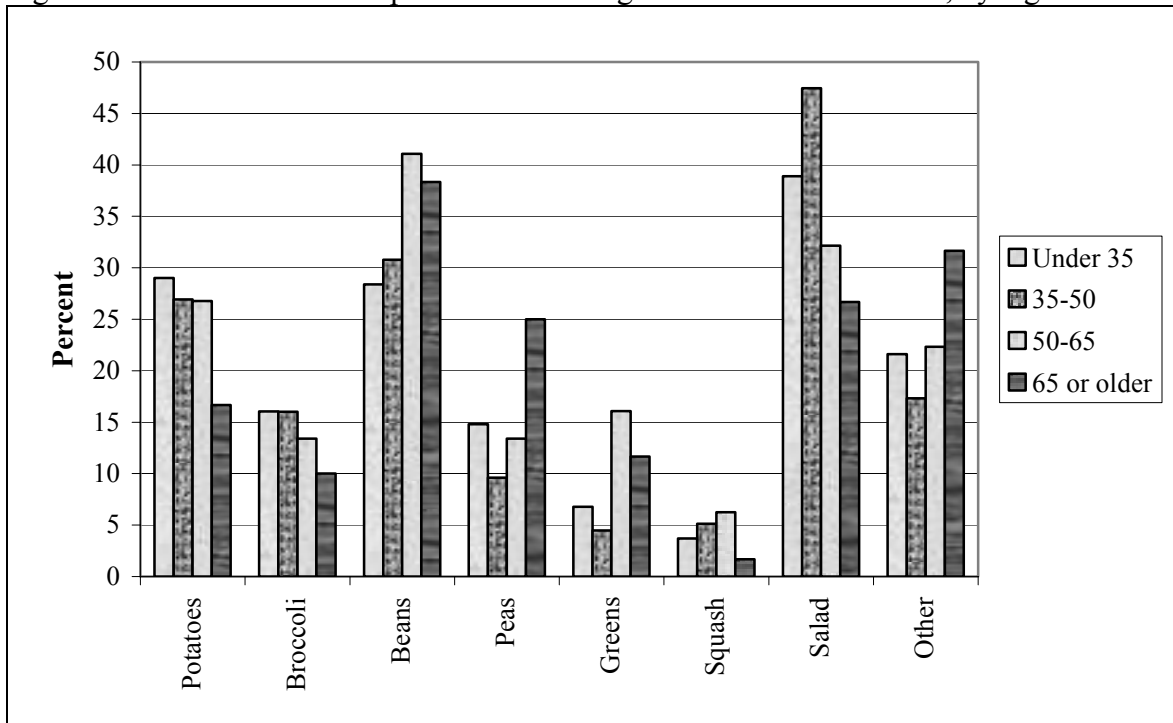


Figure 20. Percent of Consumption of Other Vegetables with Sweet Corn, by Race.

