

proached the admissible or acceptable range. Flavor evaluations on peach samples indicated these products were acceptable. Differences in flavor scores between peach samples with the SO₂ and water dip, although not significant, could indicate a color bias. Panelists were given these samples with no instructions regarding color differences. Both the color of the SO₂ and ascorbic acid dipped samples were much closer to fresh peach color, with a more pleasant bright yellow hue, than the other dried samples which were darker and more brownish. The average score for mangos indicated that the flavor was acceptable, but no commercial samples were available for comparison.

Table 4. Average flavor scores on rehydrated celery stalk, mangos and peaches.²

Celery (rehydrated)			
Drying method ¹	C + S	S	S + C
Score	3.4	3.5	3.0
Peaches			
Pretreatment	SO ₂ dip	Ascorbic dip	Water dip
Score	2.0	2.4	3.1
Mangos			
Pretreatment	SO ₂ dip		
Score	1.6		

²Flavor scores were based on a hedonic scale of 1-5 (1 indicates a sample that is desirable, while 3 is an acceptable sample), and averages were obtained from eight panelists.

¹C = conventionally hot air dried; S = solar dried.

Although no formal tests were made on carrots, green peppers and parsley, informal comments on odor and appearance indicate that they were liked more than their equivalent commercial counterparts.

In conclusion, preliminary solar drying tests have been made on two fruits and four vegetables grown in Florida. These tests with an experimental dryer, with solar energy increased two- to three-fold over direct radiation and forced air circulation, indicated acceptable dried fruits and vegetables can be produced by this method. Studies on combinations of solar with conventional hot air drying confirmed the possibility of maintaining acceptable *product quality* and feasible drying time while decreasing energy costs by augmenting with solar energy. These preliminary studies suggest further studies of such drying combinations, may lead to development of new methods of food dehydration beneficial to the food industry as more traditional energy sources are depleted.

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POINT-OF-PURCHASE ADVERTISING MATERIALS FOR FRESH PRODUCE: RETAILERS' PREFERENCE¹

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Abstract. An estimated \$1 million will be spent during 1977 for point-of-purchase (POP) advertising material to promote Florida agricultural products. Commodity organizations with modest budgets cannot afford effective television, radio, or newspaper promotion campaigns, but these groups can afford POP advertising.

A primary concern among POP advertisers is retail acceptance and use of their materials. Several sources estimate that no more than 25% of POP materials sent to retail firms is actually used, even though the materials are provided at no cost.

This research reports on the types of POP advertising materials preferred for fresh produce items by produce merchandisers of 38 major food retail firms in five major U.S. markets for Florida produce. Results can be used by agricultural commodity groups to develop POP materials that better fit the needs and preferences of major retailers.

Fifteen years ago, U.S. agricultural groups spent an average of 10% of their annual budgets on point-of-purchase (POP) advertising (7). Although current, precise figures on POP advertising by agricultural commodity groups are not available, some Florida commodity groups spend considerably more than 10% of their total budgets for POP advertising. It is estimated that approximately \$1 million will be spent during 1977 for POP advertising material to promote Florida agricultural products. Commodity organizations with modest budgets cannot engage in effective television, radio, or newspaper promotion campaigns because of costs. However, smaller organizations can afford to use POP advertising.

A primary concern among POP advertisers is retailer acceptance of their material. A major U.S. food retailer interviewed by Florida Agricultural Market Research Center personnel estimated that only 25% of the POP advertising material received by his firm was utilized. Others also said much was wasted, which agrees with previous research (5). There are very few recent published reports that deal specifically with the use of POP material for produce items. One study attempted to measure the overall effect of POP advertising on sales of fresh grape-

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fruit, but did not evaluate factors affecting the use of POP per se (10). Other works have dealt with POP materials in grocery stores in a general way or else have focused on items other than produce (2, 5, 6, 7).

The objective of this report is to indicate the types of POP advertising materials preferred for fresh produce items by produce merchandisers of major food retail firms. Although adequate data were not obtained to provide quantitative responses in most cases, the qualitative results can be used by agricultural commodity groups to develop POP materials that better fit the needs and preferences of major retailers, thereby increasing the chances that the materials will be used.

Procedure

Produce merchandisers for major food retailers in Los Angeles, Chicago, Philadelphia, Boston and Detroit were interviewed to analyze marketing problems for the Florida celery and lime industries during the period May through October, 1976. Although these two studies did not focus directly on POP materials, merchandisers were asked about their use and preferences for such items (4, 8).

The produce executives interviewed represented a total of 38 food retailers which controlled approximately 4,200 supermarkets in the five market areas. The combined market shares of the firms interviewed in the respective areas ranged from 84% in Los Angeles to 53% in Boston (Table 1).

Table 1. Market areas, number of firms, number of retail stores, and combined market shares of firms included in study.

Market area	Firms	Retail stores	Combined market share
	Number		%
Los Angeles	11	1,417	84
Chicago	8	1,377	83
Philadelphia	6	387	59
Boston	8	507	53
Detroit	5	513	71
Total	38	4,201	—

Because produce merchandisers' preferences for POP materials for the two commodities were found to be quite similar and because virtually all produce merchandisers expressed general preferences for POP advertising material, it is assumed that generalizations for fresh produce other than celery and limes are justified.

Research Findings

Point-of-purchase advertising is used for produce by all firms interviewed. Nearly all firms readily accept POP material, review it, and forward it to their retail stores if suitable. Only one large firm prefers to print its own POP material in order to maintain a uniform store appearance. Merchandisers expressed preferences for three basic types of POP materials: price-cards, recipes, and pictures of the product. Large items such as window signs, banners, and over-the-wire hangers were also mentioned, but were not very popular. Large materials appear to be less important today than in the past (5).

Produce merchandisers voiced concern over four problem areas with regard to POP advertising materials: quality, quantity, size and convenience of use. Additional details pertaining to these four areas appear under specific types of materials: price-cards, recipes, pictures, and large materials.

Quality

A frequent request was for "high quality, tastefully designed" materials. Although taste and quality are highly subjective, merchandisers indicated a preference for items printed on high quality materials with attractive full-color pictures of the product. Attempts to economize on the weight of printing materials or in use of color are usually "pennywise and pound foolish." Also, printed messages, if used, should be kept brief. Merchandisers also requested that tie-in items be included if possible to increase the versatility of the POP materials. This is consistent with earlier findings (5).

Quantity

Several large firms complained of receiving too few materials for all stores in a management unit. Several merchandisers said that if they did not receive enough kits to provide at least one per store, none was used. When more than adequate quantities of desirable materials are provided, the extras are sent to large, high-volume stores with large display areas.

Merchandisers particularly wanted larger quantities of price-cards and recipes. Price-cards are used up quickly because of price changes, and consumers "really pick up the recipes," according to executives interviewed.

Size

The size of POP advertising materials, particularly for price-cards and pictures, is a key factor in determining whether or not the materials are used. All produce managers were asked for their preferred dimensions for POP materials. Most preferences were expressed as a maximum; almost all indicated a desire for smaller materials than they currently receive. The most common complaint was that many items received were too large.

Although 15 different dimensions were specified as "preferred," there was considerably more agreement than is apparent at first glance. There was also a fair degree of flexibility; 14 of those interviewed also gave a second choice of dimensions. When first and second choices are analyzed together, 16% of the choices were for POP materials 5" to 5½" vertically by less than 14" horizontally. Eighteen of 49 choices or 37% preferred a fairly standard 7" x 11" format. Another large group, 31% of the choices, preferred the relatively common 11" x 14" materials.

Sizes larger than 12" x 12" were not listed as first choice by any of the produce managers interviewed, and only four gave such sizes as a second choice. The few merchandisers preferring larger sizes were in cooperative chains that served a diverse group of retail outlets.

Vertical and horizontal dimensions are also important. A card which measures 11" vertically by 14" horizontally has a much better chance of being used by retailers than one which measures 14" x 11". The primary reason is that many stores have double-tiered produce racks and material that is too "tall" tends to block shoppers' view when suspended above the product on either level.

Another factor determining POP material size is the nature of the commodity, i.e., the usual importance of the item to the produce department. Bulky, high-turnover items will typically justify larger shelf space and consequently larger POP material than items which are usually allocated small display areas. It does not follow that providing large POP materials will encourage large displays of the promoted item; this strategy may occasionally pay off, but generally, if the material does not fit the usual display space, it is discarded.

Convenience

Retailers have been faced with rapidly escalating labor costs, so they are concerned with keeping labor requirements at a minimum. Merchandisers expressed concern about installation and removal of POP materials. They require materials that are quickly and easily installed and removed. Several merchandisers said that they would not use "stick-on" (self-adhesive) materials. Although such materials are easy to apply, they are difficult to remove. Several firms prohibit the use of transparent tape to install POP material as well.

Price-Cards

Price-cards were the most popular form of materials, mentioned by nearly two-thirds of the merchandisers (Table 2). Most were quick to specify detailed characteristics and to elaborate on problem areas. Many firms complained of receiving too few price-cards. Related to this was the common complaint that the usable life of price-cards is too short. This criticism has been reported by others (1). Retailers said that price-cards are frequently used for special prices which may last only three or four days, after which the material is usually discarded. Many retailers will feature or special a specific produce item numerous times during its season, so that stores use many price-cards. Merchandisers suggested that the cards be made of a durable material such as plastic so that prices could be easily wiped off and the cards reused. Another suggestion was to provide slotted cards in which standard-sized plastic price numerals could be inserted.

Table 2. Types of point-of-purchase material preferred by produce merchandisers in five major market areas, 1976.

Type of material preferred	Number	Percent ^z
Price-cards	24	63
Recipes	18	47
Pictures, conventional and die-cut	16	43
Large items, i.e., over-wire hangers, window signs	2	5
None	1	3
	—	—
	— ^y	— ^y

^zBased on responses from produce merchandisers of 38 firms.

^yNot summed because of multiple responses.

An alternative to the obviously expensive re-usable price-card would be to provide larger quantities of a less expensive card, either initially or at intervals during the season, provided the season is of sufficient duration. Supplying a few at intervals would probably be more effective since distribution would remind produce merchandisers and buyers of the product's availability and promotability. Obviously, the length of the season and anticipated feature periods should be considered in determining the number and distribution frequency of price-cards to furnish retailers.

Price-cards are generally placed near the produce items in relatively accessible locations. The cards are frequently hung above tables and racks from horizontal wires or placed in metal frames designed specifically for price-cards or pictures. These frames are usually 7" x 11" in size. Price-cards with self-adhesive backs would probably not be well accepted.

Recipes and Nutritional Information

Eighteen of the 38 merchandisers mentioned recipes as an effective POP advertising technique for produce (Table Proc. Fla. State Hort. Soc. 90: 1977.

2). Several large firms have "consumer service centers" or "food information centers" where nutrition literature and recipes are available to shoppers. Most firms, however, display recipes along with the product being promoted by the recipes. Virtually all merchandisers said that recipes were very popular with shoppers, and felt that recipes enhanced sales, although no specific examples could be cited. A frequent complaint was that too few recipes were usually provided.

The preferred form for distribution of recipes was a tear-off pad 3" x 5", which is usually stuck onto a larger piece of POP advertising material. The firms with "central" bulletin boards or recipe racks need recipe leaflets with holes in them for display on pegboard-type hooks, or recipes which could be displayed in small pockets.

Some major food retailers are augmenting recipes from commodity organizations, food processors, and manufacturers with in-house materials. These firms often have home economists who conduct public relations, consumer education, and product promotion programs. Various items are emphasized during these programs, with produce items featured for two to four weeks. The "feature" includes POP material which gives the consumer a "thumbnail sketch" of the product along with selection tips, basic nutritional data and serving suggestions.

In addition to distributing recipes in conventional printed form for pad, packet, or hanger distribution, some firms print recipes on the rolled, tear-off polyethylene bags commonly used in produce departments. The bags typically have several recipes on them, and may be effective in promoting some commodities. However, this distribution technique has several shortcomings. The same recipes may appear for an extended period of time until a given stock of bags is depleted. Repetition may enhance awareness to some degree, but it may eventually dull the effectiveness of recipe distribution. The bags are used for a wide range of produce items unrelated to the recipes on the bags. The shopper may not read the recipe in the store, and the immediate impulse effect which can stimulate sales may be lost. However, this form of recipe distribution should be explored, particularly where retail firms have home economists to develop recipes.

Another important aspect of recipe-related POP material is that of printing recipes directly on consumer-sized packages. Where produce is shipped in bulk, this is not feasible, but it may be worthwhile for those commodities that are pre-packaged. It may also be possible to work with major repackers to include recipe materials in or on packages.

Pictures

Pictures and die-cut² materials showing produce items were mentioned by 16 of the 38 merchandisers as effective (Table 2). One advantage of pictures and die-cuts is somewhat longer shelf-life since they do not include prices. Another is the flexibility which they give retailers. Several pieces may be put together to form a large display if desired. This is especially true of materials such as the orange and grapefruit die-cuts distributed by the Florida Department of Citrus in recent years and die-cuts provided by the Florida Celery, Sweet Corn and Tomato Exchanges.

Although pictures are popular with merchandisers, they expressed concern over the size and the method of attaching them. The preferred sizes were relatively small, similar to those for price-cards. Installation and removal problems were mentioned in conjunction with picture materials also.

²"Die-cuts" are pictures cut out in the shape of the produce item.

Four merchandisers said that their firms would not use "stick-on" (self-adhesive) materials because of the difficulty of removal.

Large materials

Large materials include over-the-wire hangers and window signs. Most of these materials are at least 22" x 28", or 24" x 36" and larger. Very little interest was shown in those for promotion of produce items (Table 2). Only 4 merchandisers mentioned them, and only as a second choice. The firms that wanted large materials represented voluntary cooperatives with considerable variation among stores. Large materials may attract considerable attention, but they have several disadvantages which may preclude their use. They are frequently difficult to install and remove, and they may detract from the overall decor of newer, more fashionable stores. Further, when stores use large materials such as window signs or wire-hangers, they prefer uniformity which can usually be obtained only by preparing their own.

Conclusions

Point-of-purchase advertising materials offer agricultural commodity groups a relatively low-cost means of promoting their products. Point-of-purchase materials offer direct contact with consumers when all the necessary elements are present to consummate a sale and they also provide visibility with produce buyers and merchandisers. This research identified several important points concerning POP advertising.

The produce merchandisers of 38 major food retailing firms in Los Angeles, Chicago, Philadelphia, Boston, and Detroit expressed interest in 4 basic forms of POP material. Approximately two-thirds mentioned price-cards as a preferred type of POP, nearly half mentioned recipes, and 16 of the 38 requested pictures of the products. Large materials, i.e., those with dimensions larger than 11" x 14" evoked some interest but are not popular with produce merchandisers for promoting individual commodities.

Merchandisers had 4 concerns in regard to all forms of POP materials: quality, quantity, size and convenience of use. Large retailers are extremely conscious of the image that their stores project to customers. POP materials that appear cheap or shoddy may be viewed as detrimental to a favorable image, and therefore, not used. POP advertising should be printed on high grade stock in color.

Merchandisers complained that not enough materials were received, particularly price-cards. Suggestions included providing more price-cards and/or making them re-usable. Since prices may change quickly, the usefulness of price-cards is frequently short-lived. When materials

are provided to retailers, it is essential to provide adequate numbers of kits for all stores. Some firms will not distribute any materials unless sufficient quantities are received to insure at least one per store.

Size is a critical factor in determining whether or not POP material is used. Virtually all retailers preferred materials smaller than 11" x 14". The typical supermarket may stock from 150 to well over 200 different produce items, so space is at a premium. The size of the material should also be related to the typical display space allocated to the item being promoted under normal retail conditions and feature situations.

The cost of store labor makes convenience of use imperative. Materials must be easy to install and remove, or they will probably not be used.

Recommendations

Materials should be pretested with produce merchandisers since they are usually the first to see POP sent to firms. Also, the materials should be copy tested to determine what message is perceived by shoppers. Finally, the effects of the material on sales should be evaluated. While there is a prevailing optimism among food retailers, agricultural commodity groups, and industry consultants that POP materials are effective in increasing product movement, studies have shown substantial sale increases for some products, and very little, if any, benefit for others (2, 6, 10).

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