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How Do Consumers Respond to Advertising Programs for Fruits and Vegetables?

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Introduction

Fruit and vegetable consumption rates in the United States are significantly lower than what is recommended by nutritionists and health experts. Of the six groups traditionally included in the food recommendation pyramids, fruits and vegetables are significantly under-consumed (Figure 1). Figure 2 shows that fruits and vegetables receive very low levels of advertising funding relative to the other food groups. Therefore, we examine the role of advertising as a way to influence the consumption of fruits and vegetables.

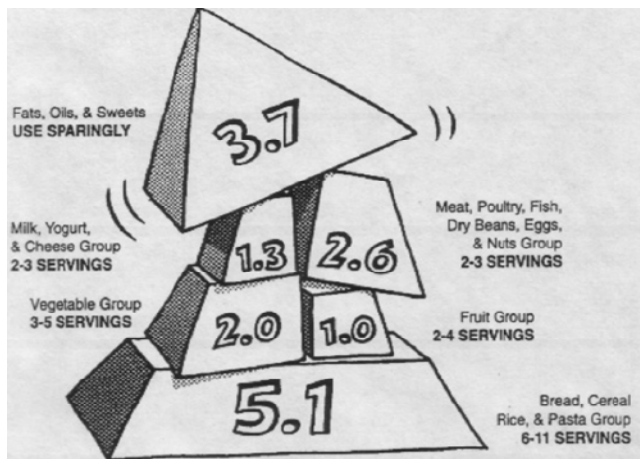


Figure 1.

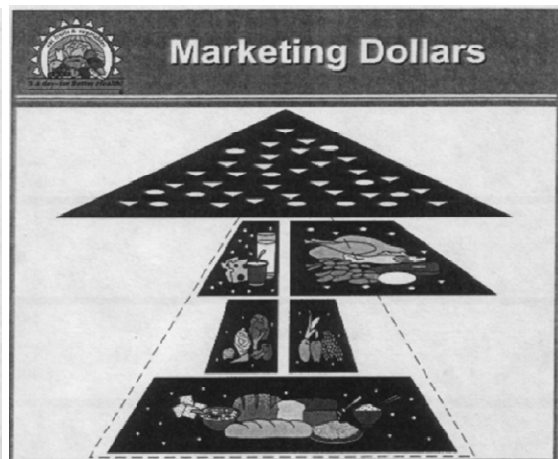


Figure 2.

Fruit and Vegetable Marketing

With few exceptions, promotion efforts for fruits and vegetables have been very small, have been commodity-specific, and have been generic given the limited number of brands for

fresh produce. There have been recent discussions in the United States about implementing a mandatory “broad-based” promotion program for all fruits and vegetables, and this issue was fiercely debated in 2009. In the United States, broad-based campaigns for fruits and vegetables, such as the “Fruit & Veggies: More Matters” campaign, have been supported by voluntary donations and have had much less media exposure than their counterparts in other countries.

Advocates suggest that commodity-specific programs compete for consumption share and that a large broad-based program may increase demand for the entire fruit and vegetable category. Opponents argue that broad-based messages simply emphasize a well-known fact—that eating fruits and vegetables is good for you—and do not believe they will influence consumer choice. Among those questioning the efficacy of broad-based campaigns, there are also concerns about the distributive implications across fruits and vegetables; a broad-based effort might only provide benefits for particular fruit and/or vegetables, rather than increase demand for all fruits and vegetables.

Experimental Design

To shed some new light on this issue, we designed an experiment that showed samples of promotional efforts for fruits and vegetables to research participants. We recruited 271 adult subjects to participate in our study; each subject was paid \$25 and asked to participate in several computerized auctions and submit bids that reflect their maximum willingness to pay for one pound of selected fruit and vegetable products. Subjects were placed into one of six treatments, and the treatments varied according to the advertisement shown to the participants. Each treatment was comprised of three 90-second video clips of the popular animated television series, *The Simpsons*, interspersed with up to two minutes of advertisements for fruits and vegetables. Advertisements for fruits and vegetables were either commodity-specific, broad-based, or a mixed approach that included commodity-specific and broad-based efforts. The six treatments were: 1) Control (no ads), 2) Broad-Based Ads, 3) Apple Ads, 4) Broad-Based + Apple Ads, 5) Potato Ads, and 6) Broad-Based + Potato Ads. At the end of the experiment each subject completed a 25-question survey that included demographic questions and questions about food preferences.

Effects of Broad-Based and Commodity Specific Advertising

Table 1 shows the average price subjects were willing to pay for the eight fruits and vegetables (apples, oranges, grapes, bananas, tomatoes, potatoes, carrots, and bell peppers) under each treatment. Here we see that the average bid was \$0.74 per pound in the control group (no advertisements), and did not exceed this level in the treatments showing commodity-specific advertisements. However, in the three treatments that include broad-based advertising, we see a significant increase in price that consumers were willing to pay.

Our results show that the average willingness to pay across the eight fruits and vegetables was 41% higher among subjects in the broad-based group compared to the control group. Our treatment that combines potato advertising and a broad-based campaign provides evidence that a mixed advertising strategy may also lead to a significant increase in the average willingness to pay for fruits and vegetables. However, the increase in demand associated with this mixed strategy is very similar to the shift in demand associated with adoption of a broad-based program.

Table 1: Results from our Experiment

Treatments	Willingness to Pay (\$/lb)
Control	0.741
Broad-Based Ads	0.836
Apple Ads	0.692
Broad-Based & Apple Ads	0.832
Potato Ads	0.740
Broad-Based & Potato Ads	0.814

Conclusion and Industry Implications

Our study provides support for the advocates of a broad-based promotional campaign who argue that such advertising would raise overall demand for fruits and vegetables. In fact, we find that the fruit and vegetable industry may be better off without any commodity-specific advertising. For these reasons, a cooperative strategy whereby producers of fruits and vegetables pool their advertising funds and promote their products generically is apt to be more profitable than a series of competing commodity-specific messages. For policy makers interested in food intake, obesity, and changing dietary habits, our results suggest that using additional resources for a broad-based promotional program may be an effective way to increase consumption of fruits and vegetables.

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http://aem.cornell.edu/research/researchpdf/wp/2010/Cornell_Dyson_wp1012.pdf

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