

THE USHBC BLUESPAPER

News and Marketing Program Updates from the
U.S. Highbush Blueberry Council
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USHBC RECEIVES STRONG ENDORSEMENT WITH POSITIVE PROGRAM EVALUATION

As required by the U.S. Department of Agriculture (USDA), the U.S. Highbush Blueberry Council (USHBC) must complete a formal program evaluation every five years. Results of the initial USHBC evaluation show positive results and a strong program. USHBC program progress from 2001 to 2004. Dr. Harry Kaiser of had considerable experience in evaluations, conducted the USHBC

His econometric evaluation of initial four years of activity shows that significant benefit to the industry. Dr. conclusions that, "The results indicated promotion has had a positive and on per capita blueberry demand." He benefits of the promotion activities of

by almost eight-fold". Details concerning the USHBC evaluation are detailed in this issue of *The USHBC Bluespaper*. Copies of the final report are available upon request.



endorsement of the USHBC was evaluated based on data Cornell University, who has commodity program evaluation.

the USHBC program over the the program has been of Kaiser states in his that generic blueberry statistically significant impact also notes that, "...the the USHBC exceed the costs

USHBC Evaluation Study Design

Under the 1996 and 2002 Farm Bills, all federal check off promotion programs must be evaluated so that their return to investors can be determined. Accordingly, the purpose of this evaluation research was twofold:

- (1) Determine the domestic market impacts of USHBC promotion programs.
- (2) Compute a benefit-cost ratio (rate-of-return) for the promotion activities conducted by the USHBC.

This research examined whether the domestic blueberry promotion activities of the USHBC have had a positive and statistically significant impact on domestic shipments of blueberries and on grower profits. Since the bulk of the Council's marketing budget is invested in the United States, the impacts of the export marketing activities conducted by the USHBC were not evaluated.

The impacts of all factors affecting domestic blueberry demand for which data are available were measured statistically. In this way, the evaluator was able to net out the impact of other important factors affecting blueberry demand over time. In addition, the value of the additional sales generated by USHBC marketing activities was estimated. These benefits to blueberry growers and processors were compared with the costs associated with the USHBC.

To carry out this independent evaluation, the USHBC contracted with Dr. Harry M. Kaiser from Cornell University to conduct the economic analysis of the domestic market impacts of its promotion programs. Dr. Kaiser is a professor in the Department of Applied Economics and Management at Cornell University, and director of the National Institute for Commodity Promotion Research and Evaluation (NICPRE). He has extensive experience in conducting economic evaluations of check off programs, having worked in this area for 19 years.

Key Evaluation Question- Do Benefits Exceed Costs?

According to the report, "In an economic evaluation of generic (not brand-specific) marketing programs, three basic questions must be answered. First, does the marketing program result in increased demand? To be effective, the program must produce higher demand in the marketplace. Second, does the program result in a higher price? It is possible for the program to increase market demand but not price, if the increased demand is equally offset by an increase in quantity supplied by growers (domestically and/or internationally). Finally, do the industry-wide benefits exceed the total cost of the marketing program? This is the bottom-line, and most important, effectiveness criterion to the industry funding the program."

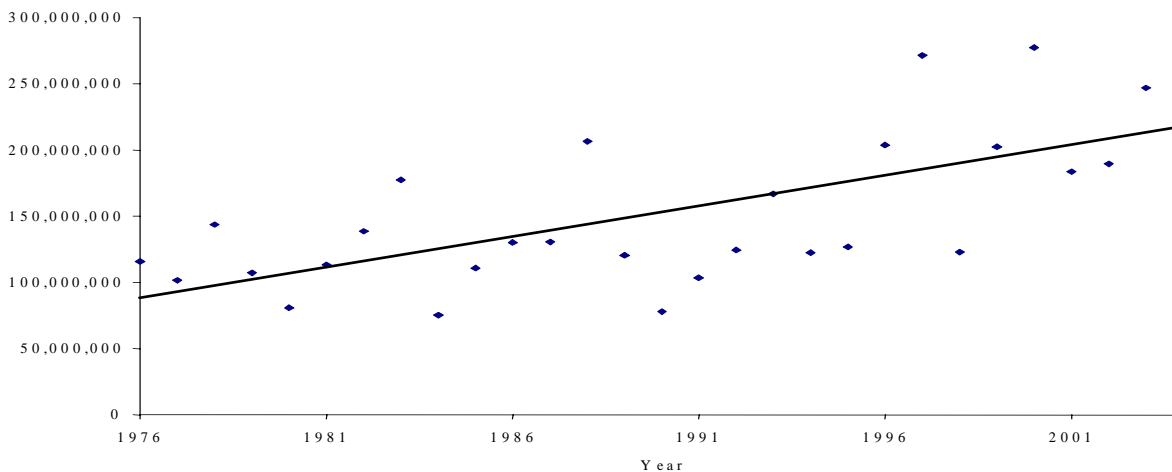
In order to distinguish the impact of USHBC marketing activities on demand for blueberries from the impacts of other factors influencing demand, an econometric framework was adopted. The econometric approach quantifies economic relationships using economic theory and statistical procedures with data. It enables the evaluator to simultaneously account for the impact of a variety of factors affecting demand for a commodity. These demand-determining factors (called "determinants") include the price of the commodity, prices of competing commodities, population, consumer income, consumer tastes and preferences, and generic marketing expenditures.

By handling the economic evaluation in this type of framework, the effect of other factors can be filtered out so that the net impact of USHBC promotion activities on domestic blueberry demand can be directly quantified. In this study, an econometric demand model was constructed for blueberry commercial disappearance (a measure of demand) in the United States, using national annual data from 1976 through 2004. The econometric model uses statistical methods with this time series data to measure how strongly various blueberry demand factors are correlated with commercial disappearance in the United States.

USHBC Program Evaluation Highlights

The evaluation report notes increased per capita consumption of blueberries since the late 1970's from a low of 5.1 ounces per person in 1978 to a high of 19.1 ounces per person in 2004. The increased per capita blueberry consumption that has occurred since 1976 has been accompanied by a positive, though sporadic, trend in grower revenue. In 1978 total grower revenue was at \$144 million. In 2004 total revenue grew to \$264 million, an increase of 83 percent.

Real (Inflation Adjusted) Grower Dollar Revenue- 1976 to 2004

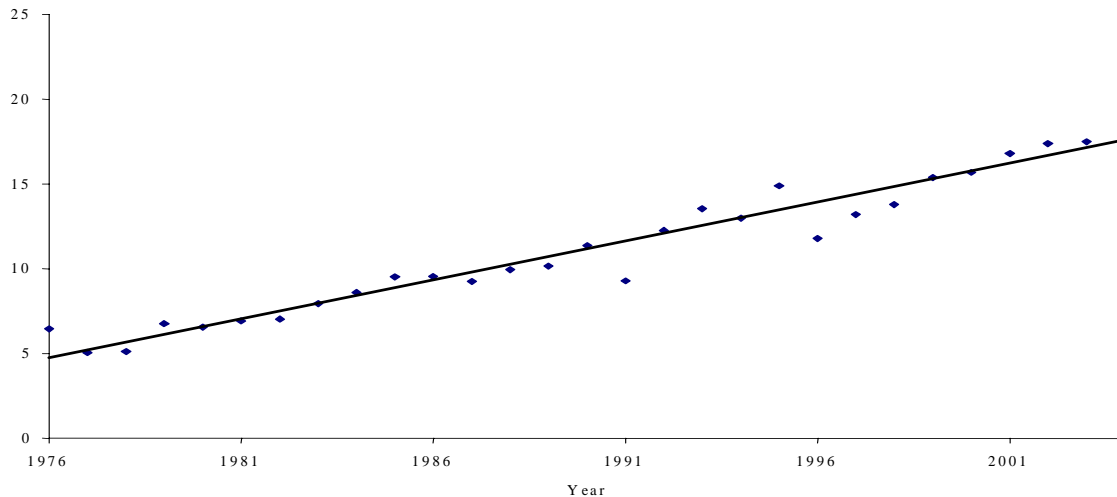


The report suggests a number of factors that could account in part for this increase:

- Strong growth in U.S. disposable income may have positively influenced blueberry consumption as the growth in real income has generally had a positive impact on the demand for most foods.

- The real (inflation-adjusted) price of blueberries has declined and, compared to other items in our economy, blueberries have become relatively less expensive.
- Growing awareness of the healthfulness of blueberries and the increasing health concerns of an aging population are a positive factor in increased consumption.
- Promotional efforts of the USHBC are a factor that must be included in the contribution to increased blueberry consumption.

U.S. Per Capita Blueberry Consumption- 1976 to 2004
(Ounces per Person)



USHBC Evaluation Conclusions

The objective of this project was to determine the domestic market impacts of USHBC generic promotion programs, and to compute an average benefit-cost ratio (BCR) for the promotion activities conducted by the USHBC. The research examined whether the domestic promotion activities by the USHBC since 2001 had a positive and statistically significant impact on domestic shipments of blueberries and grower profits. The impact of all factors affecting domestic blueberry demand (where data was available) was measured statistically. In this way, the impact of other important factors affecting domestic demand was accounted for over time.

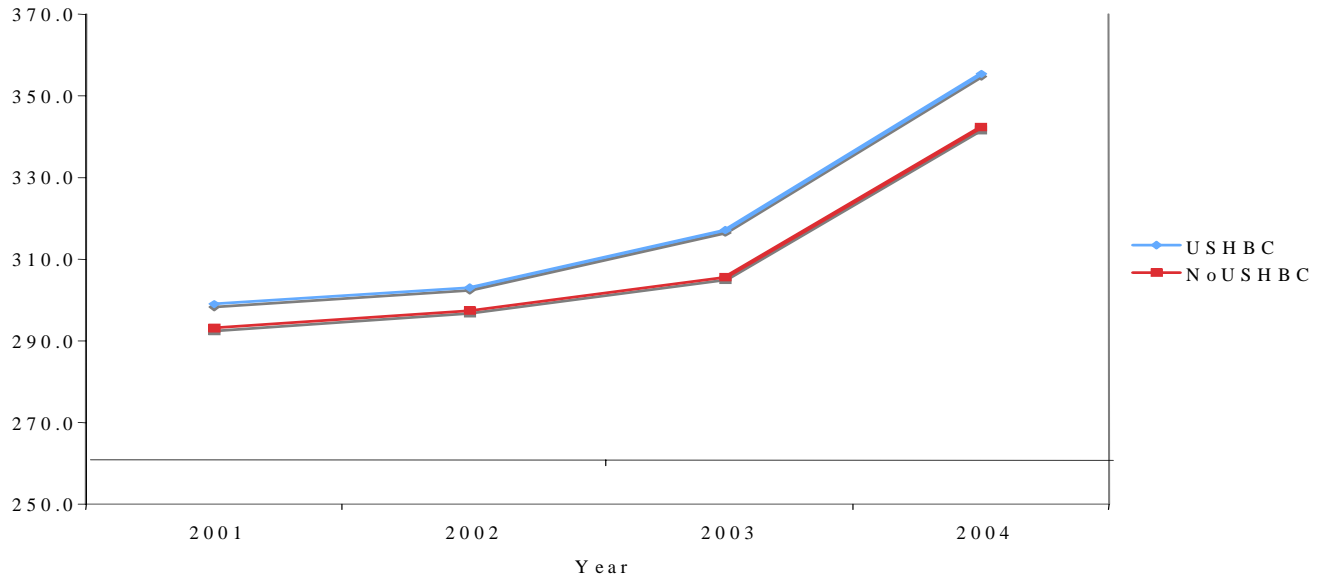
The results indicated that generic blueberry promotion has had a positive and statistically significant impact on per capita blueberry demand. This means that statistical evidence supports the hypothesis that USHBC promotion activities increase demand for blueberries in the United States. The estimated demand equation was simulated to determine the market impacts of the USHBC promotion activities for the period 2001 to 2004. In the baseline scenario, promotion expenditures were set equal to actual levels from 2001 to 2004. In the no-USHBC scenario, promotion expenditures were set equal to zero from 2001 to 2004. The difference between the two scenarios gives the total impact of USHBC promotion programs on domestic blueberry commercial disappearance.

The simulation results indicate that the USHBC had a major impact on annual blueberry demand in the United States. From 2001 to 2004, USHBC promotion activities increased total blueberry commercial disappearance by 36 million pounds in total, or 9 million pounds per year. This represents an annual increase in blueberry commercial disappearance of almost 3 percent. Hence, according to the evaluation, the promotional spending by the USHBC has clearly had a positive effect on domestic blueberry demand.

The results also indicated that generic blueberry promotion by the USHBC had a positive impact on the blueberry growers' price over this period. The average increase in price ranged from 2.3 cents per pound in the case of the least elastic supply response, to 0.8 cents per pound in the case of the most elastic supply response. The average impact over all supply responses was 1.4 cents per pound. In other words, had there not been

generic blueberry promotion by the USHBC, the average growers' price would have been 1.4 cents per pound, or 1.8 percent, lower from 2001 to 2004 than it actually was. USHBC promotion efforts had a positive impact on producer surplus (i.e., producer profits) over this period as well. The average increase in producer surplus due to generic blueberry promotion by the USHBC ranged from \$7.4 million per year, in the case of the least elastic supply response, to \$2.5 million per year, in the case of the most elastic supply response. The average increase in producer surplus over all supply responses was \$4.4 million per year. Hence, it is clear that domestic promotion efforts of the USHBC have had a positive impact on growers' profits since 2001.

U.S. Blueberry Commercial Disappearance With and Without USHBC Activity



An average BCR was computed for the generic promotion activities of the USHBC, and the BCR exceeded 1.0 for every supply response considered in the simulation. For the least elastic supply response, the average BCR was 13.22. This implies that, on average over the period 2001-2004, the benefits of the USHBC promotion programs have been over 13 times greater than the costs. At the opposite end of the spectrum in supply response, the average BCR was computed to be 4.46, implying that the benefits of the USHBC were over four times greater than the costs.

According to the report, "Given the wide range of supply responses considered in this analysis, and the fact that the BCR was above 1.0 in all cases, there is significant evidence that the USHBC's promotion programs have been profitable for the domestic blueberry industry. The average BCR over all supply responses was 7.86, i.e., the benefits of the promotion activities of the USHBC exceeded the costs by almost eight-fold."

The USHBC Bluespaper is published by the U.S. Highbush Blueberry Council; 2390 East Bidwell Street, Suite #300; Folsom, California 95630. Phone (916) 983-0111; Fax (916) 983-9022; Web Site: www.blueberry.org, or www.ushbc.org

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