Measuring the Effectiveness of Promotions

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The California Avocado Commission, and virtually every other commodity board that conducts advertising and promotion activities in a significant way, face an interesting challenge when it comes to measuring program effectiveness. We spend two-thirds of our annual revenue branding, promoting, and merchandising California avocados—from $5-$11 million each year—but how can we tell if it is working?

If CAC was a for-profit corporation that took possession of, and sold, all of the avocados produced in California, then we could measure our success in the form of net revenue from sales. Instead, it is the industry's packers who control the "deal" and those companies must source globally to maintain their customer base, so their product offerings include avocados from California as well as other locations. The packers actively promote to the retail and foodservice trade, but they look to CAC to advertise and promote at the consumer level. Consequently, the link between sales and advertising is indirect, and finding a correlation between the two becomes complicated.

The problem is one that has long been evident to econometricians, and these very competent professionals have brought the rigor of their discipline to bear on helping commodity boards evaluate the effectiveness of assessment-funded promotions. The National Institute for Commodity Promotion Research and Evaluation, the Cornell Commodity Promotion Research Program, and the Research Committee on Commodity Promotion (NEC-63) are all examples of organizations designed to enhance the understanding of commodity promotion economics. The Commission is fortunate to have been the focus of such analyses by several prominent members of NEC-63, Dr. Hoy Carman, professor emeritus, and Dr. Richard Sexton, chair and professor, both with the Department of Agricultural and Resource Economics at the University of California, Davis.

Recently, Drs. Carman and Sexton studied the impacts of the Commission's promotional programs from 1994 through 2012. They reported their findings to the CAC Board on November 14, 2013, in Irvine. The methodology used in their studies largely consists of economic modeling and statistical analysis. Several models were used to isolate the impacts of promotion expenditures on avocado demand from other factors, such as consumer income, which contribute to demand growth. Statistical analysis of retail-level data was also performed to determine the effect of regional promotions. Weekly retail scan data from across the U.S. were analyzed for the five-year period from January 2008 through December 2012. This included a close look at the impacts of CAC's 2012 Fourth of July initiative.

Studies of generic advertising generally summarize results in the form of grower benefit-cost ratios. The average benefit-cost ratio (ABCR) is the total incremental benefit generated by the program divided by the total incremental cost to fund the program. If the ABCR is greater than 1, then the program has been profitable for the industry. Carman and Sexton concluded that the ABCR for the period studied ranged from 2.12 to 9.28, which essentially says that for every grower dollar invested to fund CAC advertising and promotion, growers realized a return or benefit of $2.12 to $9.28. They also found a statistically significant (95 percent level) and positive impact on per capita sales in 10 designated marketing areas (DMA) where CAC conducts promotions—about 2.3 percent in additional sales per week. During the Fourth of July period in 2012, per capita sales rose by 5.6 percent in the four DMAs where California avocados were promoted on television and radio. Carman and Sexton wrapped up their report with this message to the CAC Board:

"The growth in U.S. fresh avocado demand over the last two decades is unprecedented for the fruit and vegetable sector, and the promotion programs conducted by CAC have been a very important factor contributing to the increased demand. Avocado growers have realized a very attractive rate of return for their expenditures on promotion programs. Without the demand expansion produced by the industry's promotion programs, increased imports would have easily reduced avocado prices to levels that would have made California production unprofitable."

If you attended the last series of District meetings, where some of the findings from the Carman and Sexton study were previewed before the grower community, you know the story goes a little deeper. The recent study confirmed an earlier finding by Carman, Li, and Sexton in 2009, that looked at the effect of CAC promotion expenditures from 1962 through 2007, showing that demand for fresh avocados is highly price inelastic. That is, grower and wholesale prices are very responsive to changes in the supply of avocados in the market. Both the recent study and the previous work estimated the price elasticity of demand to be about -0.25. An elasticity of demand is the percentage change in consumption due to a 1 percent increase in price, so this number says that if you increase price, say by 10 percent, sales will only drop by 2.5 percent. Dr. Sexton points out that "the flip side works as well….that is, a 2.5 percent increase in production would drop price by 10 percent."

To me, all of this points to the ever-present need to stoke the engine that fuels demand for California avocados. It also signals something growers know all too well—that the U.S. market for avocados is extremely fragile and sudden supply increases, from any source, will bring severe, negative price impacts in the absence of demand growth.

If you think we can dispense with spending assessments on advertising and promotion, consider the economic analysis completed by the U.S. Department of Agriculture (USDA) in 2004 as it prepared to open the entire U.S. to imports of Mexican avocados. That study projected that Mexican avocado imports would increase to 141 million pounds, bringing total annual imports to 250 million pounds. The USDA projected that California avocado prices under this scenario would fall by 26 percent at the producer level.

Dr. Carman, with a smile, told the CAC Board, "The reality of course is that imports increased to over one billion pounds, yet the real grower price has, on average, remained nearly constant. The USDA study did not consider the effects of advertising and promotion, an important oversight in light of actual developments."