
WH B104 10:30am
Title: What Can We Learn from the Experience of the Dairy Promotion Program.

Moderator: Jens Knutson of the American Meat Institute.

Other presenters: Lester Myers - Price, Income and Demographics; Burdette Breidenstein - Advertising and Promotion; Patrick Luby - Industry Challenges.

Presentation Outline

The reason for participating in this symposium is because of my experience in working with the dairy promotion program during the past 15 years. My associates and I began doing economic analysis for the New York State Dairy Promotion Board in 1972. We conducted several consumer surveys. And we developed econometric models to measure the net effect of advertising on sales. I will draw on that research experience, but I also will draw on what I know about the operation of the dairy promotion program. My plan is to identify and discuss briefly some of the things we have learned that might be useful to those interested in doing consumer analysis of the meat promotion activity or any other commodity promotion effort.

The dairy industry first began formal generic promotion programs in 1915 with the development of the National Dairy Council. Some states had mandatory checkoff programs for milk as early as the mid-1960's. New York's mandatory checkoff program began in 1972. The national checkoff which now raises about $200 million annually became effective in May 1984. About $145 million of the $200M is now invested in media advertising. The balance is invested in other promotion activities, nutrition education programs, nutrition research and new product development. So the
dairy industry has experience. Some economic analysis has been completed. Most of
the comments that follow draw on my knowledge and understanding of the results of
that research.

1. First I would like to make a point by a direct response to one of the questions
posed by the symposium organizers. One question in part asked, "If prices and
incomes are the most significant variables, then what is the role of product
promotion?"

Knowledge about the relative importance of or size of the elasticities for price,
income and demographic factors is not sufficient; such information is of little
value in making decisions about how to allocate funds among promotion and
advertising activities. And they are of little value in looking at the welfare
implications unless we also know something about the net relationships between
the advertising or promotion effort and sales or consumption. We can look at
this relationship like we look at a fertilizer response function.

2. It is absolutely necessary that whatever economic research we do be of the
highest quality and relevant. Most people involved in generic advertising and
promotion have little use for economic analysis. To get their attention and
respect and support one has to address issues as they see them and publish results
so that they can use them. In addition the analysis must recognize or take into
account the creative expertise of advertising agency personnel and the politics of
the industry.

When we began work on milk promotion in 1972, no one, except the majority of
the 10-person NY Milk Promotion Board and the Director of the NYS Division
of Dairy Industry Services wanted us involved. That was especially true of the
dairy promotion organization management staff and the advertising agency
personnel. We have developed a reasonable level of creditability since we
started. But promotion personnel do not like negative results.

3. Econometric techniques have been used to measure the impact of generic media
advertising on sales. In almost every case the results indicate positive effects on
sales. Most of the studies have been on fluid milk advertising. Experimental
design studies of the mid-60's indicated positive results for cheese and butter
advertising as well. More recent econometric studies of cheese promotion show
generally positive results but with less robustness.

4. The law of diminishing returns also applies to advertising. Most of the models
that I have seen or worked with have better statistical properties when
structured to recognize diminishing returns. The marginal rate of return from
our fluid milk advertising models is about $6 at an expenditure level of 8 cents
per capita and $1.60 at 25 cents per capita.

5. In a study of generic cheese advertising we found complimentarity between
brand and generic advertising expenditures. This implies potential gains from
joint and coordinated efforts with brand advertisers.

6a. Advertising elasticities may differ substantially from market to market. From
the several single equation models that we have developed for the different
markets in New York State we have observed advertising elasticities in New
York City six times greater than those in Syracuse, Albany and Rochester. In
one study for one time period we observed an advertising elasticity for the
Buffalo market which was fourteen times greater than that observed for New York City. A times series cross sectional model of 12 fluid milk markets in the United States implies substantial market differences, although the model is not constructed so as to directly identify those differences.

6b. Advertising elasticities also differ for the different dairy products. It's probably redundant to say that the advertising elasticity for cheese is likely to be different than one for fluid milk. Then one must also be aware that the advertising elasticities for advertising different types of meat might be substantially different. We've developed models for both fluid milk and cheese and the elasticities are quite different.

6c. We suspect that advertising elasticities are different for different media. We have attempted to develop models that would provide a measure of the different media elasticities. So far we have not been successful. But again it will be essential if we are to help the promotion groups allocate their funds across media to have some measure of the differences in media elasticities, if any.

6d. Generic advertising has different impacts depending on the season of the year. In one of our fluid milk models we developed seasonal estimates of the advertising elasticity. Although the differences were not large numerically, the differences were large enough that an optimum allocation compared to the actual allocation would have resulted in about a $2 million greater return to dairy farmers shipping to the New York City market over a period of four years.

7a. There are several data problems. An important one has to do with how the advertising effort measured. Most of the work done so far uses an estimate of
dollars expended. Even this number is difficult to come by in the dairy industry because of the large number of promotion organizations involved in any one market. But dollars expended do not measure quality differences and do not measure "real advertising" effort because media in different markets have different costs per unit of advertising and different time slots have different size and type of viewing audiences. An adequate coverage of the issues involved in measuring the advertising or promotion effort would take much more time than we have available. But it is probably as important as any of the many data issues.

7b. Appropriate measures of consumption are not readily available. We've had relatively good success in developing estimates of the sales response to fluid milk advertising because the federal milk marketing order system provides good estimates of fluid milk sales in federal order market areas. But once one tries to move on to hard products, comprehensive measures of consumption or sales are not available from the public sector and the data available from the private sector is not comprehensive enough for our purposes. For example, the Market Research Corporation of America's panel data covers only food purchased for at-home consumption. The Nielsen store-audits measure only sales through grocery stores and therefore also cover only at-home consumption. Volume measures of the sale of commodities at a level removed from retail or consumer in most cases are not sensitive enough to provide an efficient measure of the response to the advertising effort. The collection of the appropriate data is probably the most important and costly part of doing good economic analysis of the commodity promotion programs. I think we should explore ways that the different commodity groups might share in the cost of data gathering so as to minimize or
at least reduce the cost to each commodity group. This is perhaps the only way that the kind of analysis that needs to be done can be economically feasible.

7c. It is necessary to have monthly estimates of sales and of advertising effort in order to measure the effect of the advertising effort. The carryover effect for fluid milk appears to be less than a year, from 5 to 6 months. The use of annual data in analysis will not uncover or measure the effect of the short term carryover effect. It also means that it is necessary to use some form of distributed lag to measure the carryover effect. This was proven and pointed out by Nerlove and Wahl in their 1961 Journal article.

7d. A case study approach is probably necessary to measure or understand the impact of promotion other than media advertising. In some states an increasing share of the budget is going to support in-store promotion programs. There is some talk of generic couponing. Estimation of the impact of these "other" promotion activities will require special data.

In summary, I want to commend the organization of this symposium. I am positive that program managers, board members and economists working with or studying the various commodity promotion programs will gain much from an exchange of information--from basic data sharing to program evaluation. This is essential if checkoff funds are to be collected and allocated in a near optimum way.