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Cattle--Prices

IMPACT OF A PRICE PREMIUM ON  
SALES OF BRANDED, LOW FAT,  
FRESH BEEF

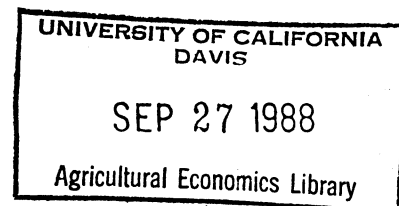
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# ABSTRACT

A laboratory test was conducted to study the impact of a price premium (25%) on sales of branded, low fat, and natural beef. Price resistance was significant, but there is a consumer segment willing to pay a premium for a product low in fat and free of artificial ingredients.

IMPACT OF A PRICE PREMIUM ON  
SALES OF BRANDED, LOW FAT,  
FRESH BEEF

Research sponsored by the National Live Stock and Meat Board (Yankelovich, et al. 1983, 1985 and Burke Marketing Research) indicates an increase among Americans in concerns for diet and health. As a result, consumers exercise care with respect to fat intake. The beef industry has responded to these changing consumer preferences by making available increased offerings of leaner beef such as closely trimmed choice beef, or beef cut from carcasses which are lower in fat. Marketing efforts by those in the beef industry have also increased and have included consumer education, advertising and retail- and wholesale-level product differentiation such as branding.

Fresh beef merchandising is experiencing pressure for change, as the industry gradually develops a marketing orientation rather than the traditional commodity (or production) approach. It is reasonably clear that consumers, or significant consumer segments, desire a range of beef products, e.g., lean vs. a richer, fuller-flavored product (Menkhaus, et al.). There is also a consumer segment which is receptive to a branded, low fat, and natural fresh beef product (Skaggs, et al.). However, it is not known whether consumers will purchase beef at the increased prices necessary to offset both the increased costs of producing and marketing these types of fresh beef products.

Increased costs in the case of lean beef may be due to: (1) decreased use of concentrates and increased use of roughage where more feed per pound of gain is required; (2) higher costs of maintaining cattle for longer periods of time to ensure a year-round supply of beef when supplies are seasonal; and (3) lower proportions of the live weight as carcass weight because of decreased fat. If growth stimulants such as hormones are avoided, additional costs will be incurred because more feed per pound of gain is required. In

addition, marketing costs such as advertising, branding, and other forms of product differentiation will contribute to higher unit costs and prices.

The overall purpose of this paper is to briefly report the procedures and results of a study of the impact of a price premium on sales of branded, low fat, and natural fresh beef. The underlying impetus for this research was the premise that a price premium is required to offset added costs of production and marketing of this type of product as compared to regularly merchandised beef products.

### Procedures

A laboratory test market (LTM) conducted in the San Francisco Bay area during July, 1987 was the primary procedure and source of data. The LTM was employed in lieu of a conventional market or in-store test due to the expense involved with the latter approach as compared to the LTM and the inability to identify cooperating stores for the in-store test. Potential cooperators were reluctant to participate in a market test because of additional labor required and they did not want to risk losing customers by carrying a different quality of meat and by charging a premium price. The LTM procedure is explained in more detail by Skaggs, et al. and Wind, et al.

The Bay area was chosen as the study site because of its dense population, as well as having a population with diverse demographic characteristics. Additionally, this study area has been used in previous studies, including both Phase I and II of the industry sponsored National Consumer Retail Beef Study. Thus, contacts with firms in the area (such as Nichols Research, a consumer research consulting firm, and Durham Meats, a local meat distributor) facilitated selection of test participants and arranging for a test facility and meat products to be used in the study.

Specific to the LTM, two groups of approximately 150 female primary shoppers between the ages of 21 and 64 were randomly selected from a computer

listing to participate in the study. Each consumer was paid 20 dollars for their participation in the study. The first group of shoppers (test cell) arrived at the study site in Sunnyvale, California in groups of six to ten. Each group was first seated in a large room where they completed a self-administered questionnaire related to demographic characteristics and beef buying practices and attitudes. After completing the questionnaire, all consumers read a promotional brochure which described the characteristics of the branded, low fat and natural beef (test product). The brochure served to simulate advertising through the mass media.

Next, the consumers were ushered into the simulated supermarket--a room containing a refrigerated meat case. The meat case contained equal amounts of test product (labeled Wyoming Lean Beef) and control beef (referred to as Supermarket Beef), which was typical of the beef sold in area supermarkets. The test product was taken from carcasses which graded low good (now select) with 0.2 inch of external fat over the ribeye. The control beef came from carcasses with a quality grade of high good with 0.5 inch of external fat over the ribeye. Both types of meat were trimmed to 0.3 inch or less of external fat on all outer edges of the retail cuts. The test product had less visible seam fat as compared to the control. However, test and control ground chuck both contained 20% fat.

Five cuts of each type of beef were used--chuck roast, rib-eye steak, New York strip steak, top round steak and ground chuck. The price per pound of Wyoming Lean Beef was 25% higher than that for the Supermarket Beef. The Supermarket Beef was priced consistently with the same cuts in a number of area supermarkets.

In the simulated store, the consumers were told that two types of meat, Wyoming Lean Beef and Supermarket Beef, were available for purchase at 25% less than the labeled package price. After the shopping experience, the

participants were asked to complete a post-purchase questionnaire, which related to differences in the types of meat in the counter, as well as characteristics of each.

Approximately ten days after the in-store experience, the meat buying consumers were interviewed (unexpected by them) by telephone on their reactions to the beef they purchased and ate. During the interview, consumers were asked if they wished to purchase more beef at the regular package price (no discount). If interviewees wished additional meat, they were told it was out of stock.

The procedure for the second group of 150 participants (control cell) was identical to that just outlined, except the test product was not available for sale. Thus, two cells (cell I - test beef and control beef; cell II - control beef only) differing only in the types of beef sold, made up the LTM cellular design. In addition, a similar study, the objective of which was to determine the appeal of a branded, low fat and natural fresh beef product, was conducted in 1985. Prices in the 1985 study were equal for both the test and control products. The results of the 1985 LTM are reported in Skaggs, et al., and provide a benchmark, in addition to data from the control cell, for analyzing the impact of a price premium on test product sales.

#### Summary of Results and Conclusions <sup>1/</sup>

The purchase rates for the control and test products for both the 1985 and 1987 LTM studies are reported in Table 1. The effect of a 25% price premium for the branded, low fat product was a 38% reduction in the purchase rate. However, the rates of purchase for test and control beef in the 1987 LTM, where the test product was priced 25% higher than the control, are not greatly different (39% vs. 42%). Purchase patterns for specific cuts for the test and control products were similar with the exception of ground beef. Ground beef purchases by test product buyers were twice as great as ground beef purchases by control product buyers.

Table 1. Purchase Rates for Test and Control Products, 1985 and 1987 LTM Studies.

	Test Cell	Control Cell
<u>1985 LTM</u> <sup>a/</sup>	(%)	(%)
Sample Size	(160)	(159)
Total Purchasers	71	46
Bought Control	34	46
Bought Test	63	--
Nonpurchasers	29	54
<u>1987 LTM</u>		
Sample Size	(151)	(159)
Total Purchasers	40	42
Bought Control	6	42
Bought Test	39	--
Nonpurchasers	60	58

<sup>a/</sup> The source of the 1985 data is Skaggs, et al.

When meat purchase characteristics of buyers and non-buyers of the test product were compared, buyers were less likely to be serving beef products more often presently than in the past and more likely than non-buyers to be serving less ground beef currently. Buyers serve poultry and fish products more frequently than non-buyers. Thus, it is likely that the test product may win back consumers who have reduced beef consumption due to health reasons. In this regard, the test product may not compete directly with regular beef which is on the market.

These results may suggest that there is a consumer segment who is willing to pay more for a product which has the characteristics (low fat and natural) as advertised through the promotional brochure. Of course, the initial purchase rates, while important, provide only partial input into analyzing the impact of a price premium for a branded, low fat, and natural beef product. A discussion of the LTM results regarding consumer attitudes toward fresh beef, a comparison of pre-use and post-use reactions to both the test and control



products, and reorder rates follows. Specifically, the discussion of the results and conclusions focus on three marketing issues which affect consumer's acceptance of the test product--the concept (low fat and natural), the pricing, and the product.

#### The Concept

Major concerns and selection criteria for fresh beef as indicated by test participants are outlined in Table 2. In general, the results suggest the need for a beef product which satisfies consumer concerns, particularly related to health factors.

- "Too expensive" was identified as a concern for steaks. Expense was somewhat less of a concern for ground beef.
- The health issue, eating too much is not good for health is a major concern.
- Beef that is not well trimmed and a perceived high fat content are primary sources of dissatisfaction. Ground beef evaluation is particularly sensitive to fat content.
- Containing artificial ingredients is a concern among the consumers sampled. "All natural" label identification appears to be an important selection criteria.
- At the point of purchase, consumers select beef on the basis of the overall appearance of the packaged product.
- Appearance judgements are influenced by perception of gristle, color and the amount of visible fat on the product.

The combination of advertising and product appearance effectively differentiate the test product from beef sold in leading supermarkets in the study area (control product). Comparisons of reactions to the test and control products by shoppers (buyers and non-buyers) in the two cells are reported in Table 3.

- Over 60% rate Wyoming Lean "excellent" on being an all natural product compared with 10% rating Supermarket Beef "excellent".
- Over 40% rate Wyoming Lean "excellent" on being well trimmed of fat compared with 22% rating control beef "excellent".
- Over a third rate Wyoming Lean "excellent" on being low in fat compared with 7% rating the control beef "excellent".

- Over 20% rate Wyoming Lean "excellent" on being low in cholesterol compared with 4% rating "good" beef "excellent".

Table 2. Concerns and Selection Criteria for Steaks, Roasts and Ground Beef. <sup>a/</sup>

	Roasts	Steaks	Ground Beef
Concerns	(%)	(%)	(%)
Sample Size	(310)	(310)	(310)
Too expensive	51	64	12
Eating too much, not good for health	49	50	50
Tough, not tender	46	42	12
Not well trimmed - too fatty	43	52	23
Contains artificial ingredients	41	39	44
High cholesterol content	37	41	48
High fat content	35	36	70
Not juicy, dried out	33	24	15
<u>Selection Criteria</u>			
Identified as "Very Important" <sup>b/</sup>			
Sample Size	(309)	(308)	(309)
Absence of gristle	69	76	63
How appetizing it looks	66	75	67
Color	59	65	69
Absence of waste	58	59	--
How well trimmed	57	62	--
Amount of marbling	47	47	--
Labeled "All Natural"	46	46	51
Price	43	43	39

<sup>a/</sup> Only the most frequently identified concerns and selection criteria are reported.

<sup>b/</sup> Based on a four point scale - "Very Important", "Pretty Important", "Not too Important", or "Not at all Important".

Among buyers of the test product in the laboratory test store, "all natural" and "low fat" appeared to be pivotal issues.

- Five out of ten buyers selected "all natural" as the most important reason for buying.
- Almost four out of ten buyers selected "low fat" descriptions as the most important reason for buying.

### The Pricing

This study was designed to learn more about the relationship of pricing vis-a-vis product quality on consumer purchases of a branded, low fat and natural fresh beef product. The basis for evaluating the impact of a premium

price on consumer purchases was to compare the findings from the 1985 laboratory test market, when the test product was priced at parity with supermarket or control beef, with the findings from the 1987 study when the branded product was priced 25% higher than control beef.

Table 3. Post Purchase Reactions to the Test and Control Products.

Rated "Excellent" <sup>a/</sup>	Test Product (%)	Control Product (%)	Rated "Excellent" <sup>a/</sup>	Test Product (%)	Control Product (%)
Sample Size	(151)	(159)		(151)	(159)
Color	58	41	Tender	31	15
Appeals to adults	49	41	Flavorful	30	15
How appetizing it looks	54	37	Absence of gristle	37	15
Juicy, not dried out	32	31	Amount of marbling	24	14
Ease of preparation	28	30	Appeals to children	20	13
Appropriate for special occasions	37	30	Price	7	13
How well trimmed it is	44	22	Taste	25	12
Absence of waste	42	20	All natural	62	10
Value for the money	11	18	Low in fat	36	7
Nutritional value	37	17	Low in cholesterol	21	4

<sup>a/</sup> Based on a four point scale - "Excellent", "Good", "Fair", or "Poor".

The findings from the 1987 study, where premium pricing was introduced, indicate differences among consumers in the relative importance they place on price as opposed to product characteristics. Three measures were made concerning current consumer price sensitivity.

- Price as a reason for buying beef.
- Price as selection criteria for a particular product, i.e., steaks, roasts or ground beef.
- Price as a concern or dissatisfaction with beef products.

For approximately 30% (at least for steaks and roasts) of the users, the cost is an important reason for buying or not buying beef as opposed to other types of meat (Tables 2 and 4). For over 40% of the users, the price is very important as a selection criteria for a particular beef product. Finally, over 50% of the steak users and over 60% of the roast users feel steaks and roasts, respectively, are "too expensive".

Table 4. Reasons for Purchase of Steaks, Roasts, and Ground Beef.

Reason - Top 3 Rating <sup>3/</sup>	Roasts	Steaks	Ground Beef
	(%)	(%)	(%)
Sample Size	(310)	(310)	(310)
Flavorful	82	88	66
Appropriate for special occasions	78	84	27
Juicy, not dried out	76	80	55
Tender	76	84	56
Appeals to adults	72	88	50
Taste	68	86	54
Ease of preparation	64	76	69
All natural	60	61	53
Value for the money	54	39	70
Nutritional value	45	39	30
Variety of ways served	40	27	88
Speed of preparation	33	67	74
Cost	30	27	55
Appeal to children	25	30	57
Fat content	23	25	27
Calorie content	20	18	20
Cholesterol content	19	18	16

a/ Ratings based on ten point scale where "10" = strongly encourages to buy, and "1" = strongly discourages from buying.

Ground beef is more price sensitive than roasts or steaks with over 50% of its users considering cost an important reason for buying. The overall satisfaction or lack of concern with the cost of ground beef is much higher than the satisfaction with roasts or steaks. Only 12% of the ground beef users consider the product "too expensive".

On the other hand, the findings show that the taste experience and product characteristics related to taste and texture are more important than price as a reason influencing purchase of beef in general (Tables 2 and 4).

- 70% to 80% of all users indicated taste characteristics like "flavorful", "juicy, not dried out", and "tenderness" as strongly encouraging purchase, compared with 30% for cost consideration.
- 60% to 70% of all users indicated product characteristics like "absence of gristle", "appearance", "color" and "absence of waste" very important to beef selection compared with 43% rating price very important.

- Convenience, value for the money, and the variety of ways the product can be served are among the most important reasons for buying ground beef.

The findings also show that health concerns, "eating too much beef is not good for health," along with product characteristics like "tough, not tender", and "too fatty" are as much a concern among users as the product being "too expensive". As expected, there is a very sensitive balance between price and quality values in the selection of beef. The effect of a 25% premium price for an all-natural, low fat product was a 38% reduction in trial purchases. Among the 48% (52% indicated exclusive use) of users who expected to use other types of beef in addition to Wyoming Lean Beef in the future, eight out of ten gave "price too high" as the reason for also using other types of beef.

#### The Product

The results of the 1985 and 1987 laboratory test market studies were generally consistent in measurements of satisfaction after trial and comparative evaluation with beef products currently used (Table 5 and Skaggs, et al.).

- 54% of the users were "completely satisfied" with Wyoming Lean after use in the 1987 study compared with 57% in the 1985 study. Only 9% were not satisfied in the 1987 study and 6% in the 1985 study.
- 34% of the users considered Wyoming Lean "much better" than their usual beef product in the 1987 study compared with 22% in the 1985. On the other hand, 40% of the users in this study considered Wyoming Lean "about the same" or "not as good" as their usual beef compared with 34% of the users in the 1985 study.
- 40% of the users said they would definitely re-buy after use in the 1987 study compared with a somewhat higher figure, 52%, in the 1985 study. This difference is most likely a result of premium pricing in the 1987 study, rather than a difference in perception of the product.

The repeat purchase rates (from the telephone call-back) for test beef and the control beef were almost identical at 32% and 34%, respectively. On the other hand, it should be noted that user attitudes as reflected in the response to buying interest, overall evaluation, satisfaction, comparison with beef typically purchased and some key product characteristics (notably taste

and tenderness) favored control beef. Therefore the postusage reactions were lower than post purchase expectations.

Table 5. Postusage Satisfaction with Beef Purchased, Comparative Evaluation of Beef, and Intentions to Repurchase.

	Used Test Product (%)	Used Control Product (%)
<u>Satisfaction with</u> <u>Beef Purchased</u>		
Sample Size	(57)	(64)
Completely satisfied	54	81
Moderately satisfied	37	14
Not very satisfied	5	5
Not at all satisfied	4	--
<u>Compared to the Beef Typically</u> <u>Purchased, This Beef Was:</u>		
Sample Size	(56)	(64)
Much better	34	30
A little better	27	34
About the same	20	28
A little worse	18	6
Much worse	2	2
<u>Desire to Repurchase</u>		
Sample size	(55)	(63)
Definitely will rebuy	40	54
Probably will rebuy	45	41
Probably will not rebuy	13	3
Definitely will not rebuy	2	2

The percent of users who rated control beef excellent on taste, juicy, flavorful, appeals to adults and how appetizing it looks, were higher than for the test product (Table 6). As expected, the ratings among test beef users on product characteristics associated with "health" issues like low in cholesterol, all-natural, nutritional value, low in fat and how well the meat was trimmed were much higher than ratings on the control product. The ratings for the two products were essentially the same on characteristics related to texture, gristle, amount of waste and appropriateness for special occasions.

Table 6. Postusage Ratings of Test and Control Products.

Rated "Excellent"	Used Test Product (%) (58)	Used Control Product (%) (66)	Rated "Excellent"	Used Test Product (%) (58)	Used Control Product (%) (66)
Sample Size					
Appeals to adults	45	64	Value for the money	26	53
How appetizing it looks	52	61	How well trimmed it is	57	48
Flavorful	47	59	Appropriate for special occasions	40	43
Taste	43	59			
Tender	52	56	Low in fat	58	42
Juicy, not dried out	42	56	All natural	69	38
Absence of gristle	53	56	Appeals to children	27	26
Absence of waste	62	55	Amount of marbling	35	25
Ease of preparation	54	55	Nutritional value	35	24
Color	52	53	Low in cholesterol	39	16

These patterns in the findings are not altogether unexpected. In the 1985 LTM study, the percent of users rating the control product excellent on taste was higher than the rating by test product users, while the rating on health issues was much higher for test beef.

#### Overall LTM Conclusions

The potential test product user wants two key benefits from the product:

1. A product that is low in fat and free of artificial ingredients.
2. An enjoyable eating experience--tender and flavorful.

The appeal of the product concept is broad based. Price resistance, while significant, should not stand in the way of market success if all other factors are in place. There are a sufficient number of beef users who are willing to pay more for a desired product, perhaps even more than the 25% premium used for the test.

Users were completely satisfied with product performance on health benefits. Repeat purchase and conversion (expected usage in the future) were also satisfactory, either equal to or better than the results in the 1985 parity price study.

Comparative ratings for the control product were significantly higher than test beef on characteristics like taste, flavor and juiciness. It is quite possible the test product concept of a low-fat, all natural, and premium priced product carries over in the user's mind to higher expectations for the taste experience than the present product can deliver.

#### FOOTNOTES

1/ Due to space limitations, only a summary of the LTM results are reported in this paper. A complete documentation of the results is available from authors upon request.

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