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SOME CONSUMERS WILL PAY EXTRA FOR LEAN BEEF

by Dale J. Menkhaus,
Glen D. Whipple, and Ray A. Field

Leaner beef products are becoming more common in the market place. Closely trimmed choice beef products, or beef cut from carcasses which are low in fat, are now available at most supermarket meat counters across the country. The increased offering of leaner beef has been prompted by retailers' perception that consumers want this product. Beef-industry sponsored research suggests that nine out of ten Americans exercise care with respect to fat intake. This research also provides an incentive to make leaner beef available to consumers. As a result, the beef industry is being challenged to produce lean meat that is also palatable and affordable.

Producing lean beef became a major topic a dozen years ago. During the mid-1970s, the principal focus was related to roughage versus concentrate feeding-regimes. Several studies addressed the feasibility of alternative feeding regimes which varied their use of concentrates. Some regimes kept the cattle on the range almost until the time of slaughter; other regimes put the animals on concentrate rations at an early age. Investigations found that overall cost of finishing or fattening cattle was lower in the feedlot than on the range. Such results seemed to discourage roughage or strictly grass feeding programs.

And some consumers seemed to concur. Beef from concentrated grain-fed steers is more palatable than grass-fed beef. The fatter, concentrate-fed beef is more tender than the leaner grass or roughage-fed beef. Additionally, meat from grain-fed beef scores higher for flavor.

A State Mandate

Despite such evidence, the Wyoming State Legislature in 1985 passed legislation requiring the College of Agriculture at the University of Wyoming to investigate the possibility of successfully producing and marketing a beef animal that was low in fat (grass-fed), and free of artificially introduced hormones and antibiotics. If such an animal could be produced, it could be sold under the trademarked label, "Wyoming Lean Beef." University scientists greeted this mandate with skepticism, but put together an interdisciplinary research team that included nutritionists, animal scientists, and agricultural economists. The team investigated the composition and palatability of Wyoming range-fed beef, and looked at economic comparisons among alternative production and marketing strategies for the trademarked product.

Research Findings

Part of the research activity focused on sensory and consumer acceptance tests. A trained sensory panel scored

Dale J. Menkhaus is Professor and Glen D. Whipple is Associate Professor, Department of Agricultural Economics, and Ray A. Field is Professor, Department of Animal Science, University of Wyoming.

broiled steaks from range-fed steers as less flavorful, less juicy, and less desirable overall than steaks from steers that had been finished on concentrate. This was consistent with several earlier studies.

In comparison to the sensory panel, a consumer test in the San Francisco Bay Area revealed that steaks from grass-fed steers were nearly equal in acceptance to steaks from concentrate-fed steers as measured by consumers' intentions to repurchase the products and their overall evaluations of the products.

The San Francisco Bay Area test was conducted in October 1985. In it, a randomly selected group of 155 female shoppers between the ages of 21 and 64 were given the opportunity to purchase Wyoming Lean Beef or control beef in a simulated market test. They were given twenty dollars for participating in the study. The test beef was from lean, range-fed, and naturally produced animals and graded good (now select). The control product, or beef from concentrate-fed animals, graded good to high good and was typical of beef sold in retail counters in the San Francisco Bay area.

After completing a questionnaire related to demographic characteristics, beef buying practices, and attitudes, the study participants were given promotional information that described the test beef as being lower in fat and raised in a natural environment on Wyoming's rangeland. Boneless cuts from the test and control products were placed side by side in self-service retail meat counters. The price per pound was the same for both Wyoming Lean Beef and the control beef and was representative of the price being charged in the area.

Following the opportunity to purchase any amount of meat desired each participant was asked to indicate the reasons why they had made their particular selection. In addition, individuals purchasing Wyoming Lean Beef were telephoned three times at approximately two-week intervals and asked about their degree of satisfaction or dissatisfaction with the test product and were given the opportunity to repurchase the product.

In this test setting, over 60 percent of the participants bought the test product and in total, Wyoming Lean Beef purchases exceeded control product purchases nearly two to one. When Wyoming Lean Beef was offered as an alternative to the control product, the number of individuals purchasing beef of any kind increased 54 percent as compared to the number purchasing beef when only control beef was available. The reorder rate for the test beef was 45 percent, indicating that the low fat and natural characteristics of the product may be factors important in product appeal. Other factors influencing the purchase of Wyoming Lean Beef included a positive reaction to the promotional material and the appearance of the product.

After at-home use of the test beef, the reaction to the Wyoming Lean Beef was favorable but not significantly different from concentrate-fed beef. And, after repeated usage, 68 percent of the test product users were "completely" satisfied with the grass-fed beef, while only 2 percent of the users were not satisfied. The texture and the tenderness of Wyoming Lean Beef were mentioned most often by this two percent when describing their dissatisfaction.

Interpreting The Results

These results suggest that, even though the sensory panel judged steaks from range-fed cattle to be less desirable than steaks from concentrate-fed animals, significant numbers of consumers are willing to give up some palatability in exchange

for leaner beef and a product that is perceived to be more healthful when available at the same price. In addition, the consumer test reveals that not only are consumers showing that they are highly receptive to beef products that promise to be lower in fat and more healthful, but also that there are opportunities to expand the range of beef products available in supermarket meat counters; different clientele apparently want different kinds of beef.

Price

While there appears to be a segment of the market that prefers a product like Wyoming Lean Beef, the increased costs of production and subsequent increased retail price may be a major purchasing deterrent for consumers. A second laboratory/market test was conducted to determine the impact of a price premium on the sales of the branded product (Wyoming Lean Beef). The San Francisco Bay Area was again used, and the study was conducted in 1987. The design of this study was patterned after the 1985 study except the price per pound of the test product, grass-fed beef, was 25 percent higher than the control or concentration-fed beef. As before, the control beef was priced at the market rate being charged in area supermarkets. A control cell of 150 consumers with access only to concentration-fed supermarket beef was included in the experimental design. Another 150 participants in the experiment had access to both types of beef. This aspect of the study was included to learn more about the relationship between pricing and product quality on consumer purchases of Wyoming Lean Beef.

The results of this premium pricing study indicate that consumers differ considerably in their response to price as opposed to product characteristics.

- Price is a very important reason for buying or not buying beef as opposed to other types of meat for approximately 30 percent of consumers.
- Price is very important as a selection criterion for a particular beef product, such as steak, roasts, or ground beef for over 40 percent of consumers.
- Over 50 percent of the steak users feel that steaks are "too expensive" and over 60 percent of roast users believe roasts are too expensive.
- Taste characteristics like "flavorful," "juicy, not dried out," and "tenderness" have a strong influence on the decision to purchase for 70 to 80 percent of all beef users.
- Product characteristics like "absence of gristle," "appearance," "color," and "absence of waste" are very important to beef selection for 60 to 70 percent of all users. Price is very important for 43 percent of all users.
- Health concerns, "eating too much beef is not good for health," along with product characteristics like "tough, not tender," and "too much fat" are as strong as beef users' concerns about beef being "too expensive."

As expected, test results showed some sensitivity between price and quality values in the selection of beef. A comparison

of the 1985 and 1987 study results indicates that the 25 percent price premium for the Wyoming Lean Beef reduced the purchases of Wyoming Lean Beef by 38 percent.

The results of the 1985 and 1987 market studies were generally consistent in measurements of satisfaction after initial use and comparative evaluation with beef products currently used.

- Fifty-four percent of the users were "completely satisfied" with Wyoming Lean after initial use in the 1987 study compared with 57 percent in the 1985 study.
- Thirty-four percent of the users in the 1987 study considered Wyoming Lean "much better" than their usual beef product, compared with 22 percent in the 1985 study.
- Forty percent of the Wyoming Lean Beef users in the 1987 study said they would definitely make repurchases compared with a somewhat higher figure, 52 percent of the users, in the

1985 study. This difference is likely a result of the premium price that was charged in the 1987 study.

- The repeat purchase rates for Wyoming Lean and concentration-fed beef in the 1987 study were almost identical at 32 and 34 percent, respectively.

More people rated concentration-fed supermarket beef as excellent on "eating experience" characteristics (taste, juicy, flavorful, appeals to adults and looks appetizing) than rated Wyoming Lean as excellent on these same characteristics. The reverse was true with respect to "health": characteristics (all-natural, nutritional value, low in fat and how well the meat was trimmed). Specifically, eight out of ten San Francisco users considered an "all natural" product that does

not contain antibiotics or growth stimulants a very important factor in their buying decision. More than six out of ten users considered a "low fat" product very important in their selection of beef.

The results of the Wyoming Lean Beef test market studies suggest that there is a sizeable group of consumers who are willing to pay a premium price for beef that is low in fat and free of artificial ingredients. However, both the 1985 and 1987 studies indicate that the Wyoming Lean Beef may be deficient in qualities associated with an enjoyable eating experience.

Two Important Questions

The research conducted under the Wyoming Lean Beef project suggests that 30-35 percent of consumers in the test area are receptive to a branded, low fat, natural beef product and will pay a premium for its perceived health characteristics even though marbled beef is more enjoyable to eat. As a result, there is an increasing need for producers to supply cattle that yield affordable lean meat. But, two critical questions remain. How much beef considered healthy, like Wyoming Lean, will people buy at alternative price premiums over marbled beef? And, how much of this beef will ranchers produce at alternative prices? These two relationships together will in the end determine the amount of branded, low fat, natural beef produced and eaten.

