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Consumer Acceptance of Irradiated Beef

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American consumers have come to expect food to be both nutritious and safe. To enhance the safety of beef consumption, the Food and Drug Administration approved in December 1997 the use of irradiation to kill harmful bacteria in beef. Insights into consumer attitudes toward irradiated beef provide useful information to beef producers, processors, and marketers. This study investigates factors affecting consumer acceptance of irradiated beef, using data from a survey of meat consumption in the United States.

A nationwide telephone survey of 740 households was conducted by the University of Georgia Survey Research Center between December 1999 and January 2000. The main purpose of the survey was to gain insights into consumers' perception of beef irradiation and their attitudes toward irradiated beef. The respondents were non-vegetarian, primary grocery shoppers in the households, of whom about 93% said they used to buy beef at a grocery store at least once in a month. They were given a brief introduction to food irradiation before being asked whether they would buy irradiated beef at the current market price of non-irradiated beef if irradiation would reduce the number of beef recalls while maintaining original taste. About 55% of the respondents were willing to buy irradiated beef, more than 31% said "no," while 14% were uncertain whether they would buy or not. Those who were willing to buy irradiated beef at the current price were then asked whether they would buy it at a higher price; the rest were asked whether they would buy irradiated beef at a lower

price relative to the current price. Only 6% of those who did not want to buy irradiated beef at the current price said that they would buy it at a lower price. Of those who were uncertain about their decision at the current price, only 7.6% would buy it at a lower price, while 41.5% clearly indicated that they would not buy it at a lower price. It is surprising that lowering price attracted only a very small percentage of consumers to accept irradiated beef. It seems that if consumers do not want to buy irradiated beef, they cannot even be "bribed" with a lower price to buy it.

Econometric models were estimated for the analyses of willingness-to-buy both at the current price and at a lower price to find the driving forces behind consumer acceptance of irradiated beef. Initial results show that the same set of factors affected acceptance of irradiated beef both at the current price and at a lower price, with the exception of place of residence. The results indicate that consumption of irradiated beef could be increased by enhancing consumers' knowledge about beef irradiation, and by enhancing their confidence in the adequacy of food-safety regulations and the effectiveness of the enforcement. It is important to disseminate sufficient information about beef irradiation to consumers, emphasizing the benefits of health-risk reduction while dispelling ungrounded concerns such as nutrition reduction and increased cancer risk. Further, it is unlikely that price strategies can be an effective tool for the promotion of irradiated beef.

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