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“Public Acceptance of New Food Safety Technologies”

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ABSTRACT

Objectives: To estimate consumers' acceptance of food irradiation technology and their willingness to pay for irradiated seafood products. Specifically, the research was to determine factors that affect consumers' attitudes toward using irradiation in the production process to enhance food safety and to reduce incidents of food borne illness. In addition, the contingent valuation method was used to elicit the additional amount of premium that consumers would be willing to pay for irradiated seafood products.

Background: According the Centers for Disease Control, food borne pathogens are responsible for causing 76 million people to become ill, with 300,000 of those people being hospitalized and 5,000 of them dying annually in the United States (U.S.) alone.

Food processors are interested in increasing the safety of their food products not only to provide a safer product, but also to reduce losses associated with food-borne illness problems. Recalling food products can have significant negative financial consequences for food processors and retailers alike, and those consequences are both direct and indirect. The problem has been further exacerbated because irradiated food products must be labeled as such. Given the food industry's concern over perceived risk, having to include the irradiation symbol and phrase on their product's label would most likely have dire effects. The success of the food irradiation process is dependant upon consumer acceptance since the capital cost of irradiated food processing equipment requires a

substantial level of product treatment to be economically feasible.

Data and Estimation Procedures: In the survey, a double-bounded referendum procedure was employed to elicit respondents' willingness to pay for irradiated seafood. For empirical analysis, a two-step decision process is assumed in that the probability of an individual's acceptance of irradiation technology is measured and used in estimating the demand for irradiated seafood products. Socio-demographic factors that may affect consumer attitudes toward purchasing of irradiated seafood products are then identified.

Results: The results of the analysis indicate that there is a lack of understanding among Georgia consumers with regard to irradiating food products. A vast majority of the respondents have heard of food irradiation but still do not understand its benefits. This leads to unfounded concerns associated with the process as evidenced by the fact that 55 percent of the respondents are very concerned with food irradiation. For instance, nearly two-thirds of the respondents are concerned that irradiating food products would cause cancer causing substances or ingesting irradiated products may cause birth defects.

Given these concerns, over half of the respondents think it is a good idea to irradiate food products to reduce the bacteria levels, make a safer food product and extend shelf-life. Georgia consumers are willing to pay premiums to purchase seafood products with these characteristics.

Consumers in Georgia are also significantly more concerned about the safety of imported food than they are about domestically produced food. This may provide a marketing opportunity for irradiation facilities across the county. The irradiation facilities could be used to treat imported food products to make them safer and ease consumer concerns.