WASHINGTON STATE UNIVERSITY EXTENSION

Tree Fruit Extension Economics Research Highlight

Mexican Consumers' Attitudes Towards Irradiated and Imported Apples

By Andre Murray and R. Karina Gallardo[1]

The agri-food industry must provide high-quality food while considering consumers' preferences for freshness preservation methods. Apples, harvested mainly from August to November in the US, can now be stored for extended periods due to postharvest advancements. However, like other fresh produce, apples are prone to contamination during storage. Thus, ensuring their year-round freshness and safety requires careful application of postharvest treatments. Methyl bromide (MB), a common treatment, is being phased out due to environmental concerns, prompting the search for alternative methods such as irradiation, which has been deemed safe despite some public uncertainty.

Source: Associated Press. https://www.koin.com/news/washington-apple-growers-concerned-over-mexico-tariff/

This study looks at whether people in Mexico would be willing to pay for apples treated with irradiation compared to those treated with MB. It also looks at how much people would pay to make sure the apples have no chance of being infested by insects and whether they prefer apples from Mexico or the US. The study also looks at how the way information is presented affects people's willingness to pay (scientific and layman). This research is important because Mexico is a big market for US apples, and understanding consumer preferences can help the industry make better decisions.

We found that respondents preferred lower prices when chemical treatments were used on apples postharvest, compared to having no treatment at all. This preference for lower prices increased with more information, especially among those who received a simplified explanation of irradiation. In the control group, respondents were willing to accept a price reduction for irradiated apples compared to untreated ones, but this reduction wasn't statistically significant for those who received information. This suggests that willingness to pay for irradiated apples shifted from negative to neutral compared to untreated apples, indicating a stronger aversion to

[1] Andre Murray is PhD Candidate in Economics in the School of Economic Sciences, Washington State University. R. Karina Gallardo is Professor, Extension Specialist, School of Economic Sciences, Washington State University.
This paper is published in Agribusiness An International Journal.
Reference: Murray, A.D., R.K. Gallardo, A. Prakash. 2024. Mexican Consumers' Attitudes towards Irradiated and Imported Apples. Agribusiness An International Journal, 1-25. https://doi.org/10.1002/agr.21922.

chemical treatments. Additionally, respondents across all treatments were willing to pay more for apples grown in Mexico than those imported from the US. Analyses across different respondent groups revealed that females, older individuals, those with higher education, larger families, and higher incomes tended to prefer lower prices for both chemical and irradiation treatments compared to no treatment.

The study confirms previous research showing that informing consumers about the benefits of alternative food technologies, like irradiation, can increase their willingness to pay (WTP). This highlights the need for a carefully designed marketing campaign to educate the public about the advantages and potential risks of irradiation, aiming to reduce consumer resistance. Such a campaign should emphasize the safety of irradiation for consumers and its ability to eliminate the necessity for chemical postharvest treatments.