

'Meating' dietary needs: Study sheds light on how rising prices affect meat consumption

Study shows health-focused consumers are willing to pay more for protein

By Marshall Terrill , ASU News

February 7, 2025

When prices on certain food items go up — like eggs and meat — because of the rise in plant-based diets, consumers can find an alternative.

But our diets are also culturally conditioned, so for some, cost doesn't matter — even at \$4.25 a carton or \$14.99 a pound.

An Arizona State University professor's new study, "Behavioral Correlates of U.S. Retail Protein Demand: The Case of Exercise-Driven Protein Consumption" reveals that exercise-focused individuals are willing to spend more on meat and other proteins than average consumers to meet their daily dietary needs.

Co-written Bina's co-author on the study is Glynn T. Tonsor, an assistant professor in the Department of Agricultural Economics at Kansas State University. by [Justin D. Bina](#), assistant professor in the Morrison School of Agribusiness in ASU's W. P. Carey School of Business, the study provides an empirical approach that can inform industry decision-makers.

Bina, who conducts research on nontraditional determinants of food demand and impacts of weight-loss strategies on food spending patterns, is also a key contributor to the Meat Demand Monitor project funded by the U.S. Beef and Pork Checkoff programs.

ASU News spoke to Bina to gain insight into his latest study and other research interests.

Note: Answers have been edited for length and/or clarity.

Question: What prompted you to conduct this study?

Answer: A lot of things! I view this study, and my broader research, as an intersection of three different things: my upbringing, my personal life and my professional interests.

I grew up on a farm and ranch in south central Kansas, where my dad and grandpa raised livestock. So, I've been actively engaged with the U.S. meat and livestock supply chain my entire life. That background led me to Kansas State University and a PhD program where I could assess economic outcomes related to the livestock industry.

On a personal front, I've been involved in competitive sports since middle school. Weightlifting, specifically, has been a major part of my life for the past 14 years or so. More recently, I've been competing in Hyrox competitions across the country by myself and with my younger sister. Naturally, I've become very interested in protein consumption, the quality of my diet and how to properly fuel myself for performance.

And, lastly, my professional interests are in meat and livestock economics and consumer behavior. Basically, why do we buy the protein products that we do? What are we willing to pay for them? And what are the implications of our purchasing decisions on livestock producers and food manufacturers?

I had a tremendous opportunity in my PhD program to combine all of these aspects of my life into a single research agenda. This study has been one component of that.

Q: This study seems to take on more importance given how the cost of eggs and poultry have increased in the past few months.

A: Actually, these price increases extend to other protein sources, too. We've been seeing a general increase in prices across beef, pork and chicken products since around the start of 2021. Some of that is likely attributed to economy-wide inflation. Some is due to industry-specific challenges. The current H5N1 avian flu situation is an example of the latter that is having a large impact on the U.S. egg market right now.

The last update I saw was that nearly 150 million birds across the country have been lost to H5N1 since early 2022. That puts substantial upward pressure on prices observed across all legs of the supply chain. My focus is on the consumer side, and you're exactly right. I think the message of this study is taking on new importance as consumers are observing higher egg prices. Again, they're experiencing generally increasing prices across many protein sources, but eggs especially so.

Substantial price increases like these cause many consumers to stop purchasing. My study speaks to how consumers reduce their protein purchases as prices increase and tells us who is most likely to continue participating in a “high price” environment.

Q: What were some of the most interesting findings in your study?

A: Myself and my co-author at Kansas State University, Glynn Tonsor, found that roughly one-third of U.S. adults are intentionally consuming protein to help meet some type of fitness-related goal. That number was eye-opening to me and reflects a sizable portion of the population that can impact U.S. food markets in a meaningful way.

The main takeaway from the study is that these intentional, fitness-driven consumers are less sensitive to price compared to other consumers when they are purchasing protein. In other words, when the prices of protein products like ribeye steak, bacon or chicken breast increase, fitness-driven consumers reduce their purchases less than other consumers do.

This is important information for U.S. livestock and meat producers because it provides a sense of how consumers respond when prices increase, as they have in the past few years. These results also speak to how the market for protein changes as prices change. For instance, if meat prices rise, fitness-driven consumers will reflect a progressively larger share of the market for meat in terms of the total quantity purchased. Industry marketing efforts need to be cognizant of those changes in the consumer base.

Roughly one-third of U.S. adults are intentionally consuming protein to help meet some type of fitness-related goal.

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Justin Bina

Assistant professor, Morrison School of Agribusiness

Q: Are you currently looking into the effects of Ozempic given your interest in health and demand for protein? And if so, what are you finding?

A: Yes, I am. I’ve recently launched a line of GLP-1-related research with [Tim Richards](#) and doctorate student Ujjwol Paudel from Arizona State University, and Glynn Tonsor.

We're seeing some interesting trends related to food spending patterns and, specifically, how the protein space is impacted. Briefly, it looks like GLP-1 users have higher demand for an assortment of protein products in grocery retail and food service settings. That is, they're willing to pay more for any given quantity of these products relative to non-users. This makes sense, given that these individuals need to prioritize adequate protein and nutrient intake while they are consuming fewer calories.

Q: How do exercise, weight loss, protein and how you market them intersect, and what are the implications for businesses?

A: We've seen a general reduction in per capita red meat consumption over the past 50 or so years, and poultry consumption is projected to decrease slightly in 2025. Pair this with a slowing U.S. population growth rate and projected population declines in the second half of the century. Combined, the meat and livestock supply chain is facing stagnant or declining quantities consumed, suggesting a need to offer differentiated, high-margin products to offset lost volume and maintain profitability.

Now consider the increasing societal importance placed on health and well-being. Various industry, government and academic sources have found that U.S. adults are spending more time in physical exercise nowadays. GLP-1 use is an even more recent phenomenon. Both have profound impacts on the demand for protein-dense foods, as suggested by this study and my ongoing research. This marks an important opportunity for meat and livestock producers to offer those high-margin products to a consumer group that is willing to pay for them.

However, capitalizing on this opportunity requires a thorough understanding of exactly what these health-focused individuals want in their food products. My job is to provide that understanding of U.S. food consumers so that meat and livestock producers, and the broader food industry, can maintain profitable operations while ensuring that consumers' needs are being met.

This story originally appeared on [ASU News](#).

¹ Bina's co-author on the study is Glynn T. Tonsor, an assistant professor in the Department of Agricultural Economics at Kansas State University.

Main image



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Text image(s)



Assistant Professor Justin Bina says he was inspired by his upbringing on a ranch and his personal interest in weightlifting to conduct a study on protein consumption. Photo by Samantha Chow/ASU