

PURDUE **AGRICULTURAL ECONOMICS REPORT**

Article title:	Chicken labels: How do consumer beliefs impact preference for labels?
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Summary:	We decomposed consumer preferences for food labels, such as organic, into the impacts resulting from beliefs about health, taste, food safety, and animal welfare. We find consumers have a positive association with labels on chicken, and that health and taste perception are primary drivers of demand.

Chicken is the most consumed meat in the US and surprisingly fewer academic studies have been conducted on consumer demand for chicken than beef and pork (Neuhofer & Lusk, 2021). This article highlights the findings of a 2021 article by myself and Dr. Jayson Lusk called “[Decomposing the Value of Food Labels on Chicken](#)” which appeared in the Journal of Agricultural and Applied Economics (JAAE). In it, we estimated the role of different consumer beliefs as drivers of food choice at the retail level, particularly in the areas of health, taste, safety, and animal welfare with respect to the chicken market. Furthermore, we attempted to decompose the preferences for labels, such as organic, into the impacts resulting from beliefs about the associated health, taste, safety, and animal welfare versus unobserved factors.

Consumer perceptions and beliefs have often taken a backseat to the measurement of consumer preferences in food choice studies. Recently a body of literature has sought to understand how beliefs interact with preferences in an effort to explain food choice behavior (Costanigro et al., 2015; Costanigro & Onozaka, 2020; Lusk, Schroeder, et al., 2014; Malone & Lusk, 2017, 2018). One common example of how beliefs influence food choice is the typical perception that foods with an organic label are typically considered to be healthier and of higher nutritional value than conventional alternatives (Costanigro et al., 2015; Guilabert & Wood, 2012; Smith-Spangler et al., 2012). Some of primary beliefs and perceptions that consumers value when making food choice decisions are the healthiness of the product (Costanigro et al., 2015), the safety of the product (Lusk, Roosen, et al., 2014; Lusk & Rozan, 2008), animal welfare perceptions (Clark et al., 2017; Lusk, 2018; Ortega & Wolf, 2018; Tonsor & Olynk, 2011), and taste (Malone & Lusk, 2017).

Methods

We employed a choice experiment survey with a nationally representative sample emulating the US Census population, recording a total of 2,049 responses. Each respondent was exposed to one of three information treatments regarding the production practice of slow growth chicken; 1) a pro-slow growth chicken information treatment, 2) an anti-slow growth chicken information treatment, and 3) a control with no information. The respondents answered 12 choice questions where they selected between two chicken breasts and a “no choice” option (Figure 1). On the chicken breast options, we varied the labels of organic, no antibiotics ever (NAB), no hormones added, a slow growth label, non-GMO, and one of two prominent popular chicken brands. Additionally, each chicken option has a price attached ranging from \$1.99 to \$5.99 in \$0.50 increments.

Which option would you buy?



Figure 1. Choice experiment.

We measured the beliefs with a Likert scale, which is where a participant rates a statement on a 1-5 scale with a 1 represents “strongly disagree” and a 5 represents “strongly agree” (Figure 2). To measure the effects of the beliefs we used a statistical model called a random utility model, which basically assumes that consumers gain utility or well-being from the attributes of products and not the products themselves. We perceived utility to be a function of the negative effects on well-being from price, the presence of labels, and the perceptions of health, taste, safety, and animal welfare of the products. We also measure how much participants are willing to pay for a specific label on a product.

How healthy or unhealthy do you consider chicken sold with each of the labels shown below?

	Very unhealthy	Somewhat unhealthy	Neither healthy nor unhealthy	Somewhat healthy	Very healthy
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 2. Example belief question.

Results

We observed that the most important labels in determining consumer utility are the organic and non-GMO labels. The most important beliefs were the perception of health and taste. Animal welfare was largely insignificant unless the participant was given information that favored slow growth chicken.

When analyzing the willingness to pay of the labels, we found that the highest WTP is associated with the organic and non-GMO labels, which is consistent with the utility estimates. In general, the consumers were willing to pay more for a product with the labels than without them present. Additionally, we observe that the perception of health and taste were the primary drivers of consumer willingness to pay for labels.

Conclusions

This study shows that labels are generally associated with positive value on chicken, particularly the organic and non-GMO labels. The positive valuation of these labels is most associated with the presumption of superior healthiness, taste and food safety. The perceptions of animal welfare were not particularly significant at determining the willingness to pay for any of the labels except in the treatment exposed to the positive information about slow growth chicken. The results of this study could be useful to marketing and information campaigns that target particular attributes of food and labels. We are also able to identify the particular reasons why one label may be valued over another. The results pertaining to animal welfare may indicate that unless consumer's receive additional information pertaining to potential animal welfare qualities, it is not a dominant belief when considering food choices, especially if the product has a positive health and taste perception.

Sources

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