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The Organic Label: How to Reconcile its Meaning with Consumer Preferences

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The USDA's National Organic Program (NOP), with its unified definition and labeling requirements, holds great promise for increasing commerce in and decreasing transaction costs associated with purchasing organic food. However, the label and its meaning must both be well understood and reflect the traits consumers want if this promise is to be realized.

This paper reports the results of a survey and experimental auction on consumers' preferences for organic standards. On one hand, the USDA NOP's Final Rule broadly conforms to consumer preferences regarding what practices should or should not be permitted in organic production and processing. Consumers support a strict definition of *organic* in general, opposing the use of a variety of practices historically banned by organic certifiers. For example, both the survey and auction methods found that consumers support the banning of Genetically Modified Organisms in organic food and are willing to pay a premium to avoid them. Consumers are also in accord with the Final Rule's exclusion of irradiation, biosolids, growth regulators, etc.

On the other hand, the survey and auction results reveal a lack of understanding of the label's meaning as well as a disconnect between the label's function (detailing acceptable production practices) and consumers' stated motivations for buying organic (e.g., support for a local sustainable food system).

Implications of these findings for decision makers in policy and industry are discussed. Of particular focus will be the role of these agents in promoting products that allow consumers to purchase items that reflect and support these values.

Organic food, being a credence good (Darby and Karni 1973), requires third-party verification. Prior to 2001 this function was performed by a series of independent agencies, each with a potentially different definition of *organic*. Lohr (1999) argues that a universal set of standards decreases transaction costs and facilitates commerce in organic food.

The USDA's National Organic Program's Final Rule has created this unified standard, detailing a list of inputs and practices permitted under organic production and processing. By the end of 2002 all food labeled organic must conform to the Rule. The initial proposal for the Rule, released in 1997, was widely criticized by consumer and producer groups as being too lenient. These groups were particularly vocal in their opposition to the inclusion of what became known as the Big 3: genetically modified organisms (GMOs), biosolids, and irradiation. The Big 3 are not allowed in the Final Rule.

The goal of the organic label—providing information to decrease transaction costs and facilitate commerce—is best accomplished when the label's meaning is well understood by consumers and reflects their preferences. This paper reports

the findings of a survey and experimental auction targeted at current consumers of organic food in Ithaca, NY. The major question to be addressed is whether consumers get what they want from organic food. Specifically, does the Final Rule, with its list of acceptable and banned practices, conform to consumers' preferences for what should be allowed? Does the label address consumers' stated reasons for buying organic? Do consumers really understand the label's meaning? Implications for public policy and private-firm strategy will be discussed.

Methods¹

A survey of current consumers of organic food was conducted in Ithaca NY in the autumn of 2000. Questions focused on reasons for buying organic, preferences for what should and should not be included in the definition of organic, and willingness to pay (WTP) to have or avoid the Big 3 in organic food. An experimental English auction in February 2002 attempted to validate the WTP figures by measuring them by another method. The two methods complement each other: surveys collect data from a larger sample and allow for a broader array of

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¹ Copies of the survey instrument and experimental design are available upon request from the author.

questions (attitudes, etc.), while auctions impose a budget constraint and real tradeoffs not present in hypothetical survey questions.

A survey was administered to a group of current consumers of organic food in Ithaca, NY. Ithaca is a town known for its knowledge of and activism in food issues. The surveys were completed at the two locations where organic food is most prominently sold: the local farmers' market and cooperative "health food" market. The major supermarket in the area with a significant organic produce section declined to participate. Historically, the vast majority of organic food has been bought in health food stores, not in supermarkets (Reicks, Splett, and Fishman 1997). A large number of organic growers sell at the farmers' market, so patrons at these two locations are likely to consist of typical consumers of organic food in Ithaca.

The target population of this research is current consumers of organic food. The problem is that the demographic and socio-economic traits of this population are unknown. No claims can be made that the sample group represents the general populations of Ithaca, New York State, or the nation as a whole. However, the fact that Ithaca has a thriving organic market (located primarily at these two locations) suggests that the survey respondents provide an interesting study group for this issue. These people actively seek out organic food by shopping at these markets, suggesting they belong to the market segment The Hartman Group (1996) calls "True Naturals," the "core purchasers" of organic food.

The surveys were compiled over several sessions in the fall of 2000. The farmers' market operates on Saturdays and Sundays; due to space constraints, the board of directors only granted permission to collect data on Sundays. Data were collected on September 30 and October 7, 2000. The surveying sessions at the cooperative market were conducted on a number of days and times in order to reach people with a variety of shopping habits. Only people who currently buy organic food were included. The surveys had three main components: a section on attitudes and shopping habits, including why shoppers buy organic and what they believe ought to be included in the definition of organic; a Contingent-Valuation (CV) component measuring their WTP to have or avoid each of the Big 3 included in the definition; and demographic traits such as age, gender, education and income. A total of 123 usable surveys were compiled.

The CV portion elicited open-ended responses to the three WTP questions. The baseline was a food item that shoppers normally buy organic and that costs \$1. It is certified organic, but by an agency that allows the use of GMOs, biosolids, and irradiation, respectively. Respondents were asked how much they would pay for a bag of the same item, identical in appearance, nutrition, freshness, etc., but that is certified by an agency that does not allow the use of each of the Big 3, singly. The three WTP questions were in an open-ended format that tends to produce less-biased estimates than those from dichotomous choice questions (Balistreri et al. 2001).

The experimental English auction was conducted on a different group of organic consumers (recruited via posters and email announcements) in the Economics Experiment Lab at Cornell University. The English auction was chosen because of its simplicity and demand-revealing properties (Davis and Holt 1993). Participants were given an endowment of \$20, from which they paid for any item they won in the auction. The WTP was determined by auctioning two items: a baseline item, a bag of organic blue corn chips that makes no claims about its GMO content, and a bag of organic blue corn chips that has a seal stating it is GMO-free. The original packages of the chips were just as described to the participants; participants were shown a blown-up image of the actual GM-free label. The chips were removed from the original packaging and placed in identical plastic bags so that the participants were not influenced by brand recognition, logos, or other packaging features. Items were auctioned in random order and in a number of rounds to control for order and wealth effects.

Participants were also given an exit survey asking for demographic information closely matching the 2000 survey, and a question gauging their understanding of organic labels. They were asked whether a number of practices are allowed under the definition of organic. The intention of this question was to see if they were aware that GMOs are not allowed in organic production. Other components in the question (including, e.g., manure from non-organic farms, botanical pesticides, and mined rock powders) were included because asking only about GMOs would have put too much attention on that component and possibly biased the responses.

Results

Survey respondents broadly agree with the Final Rule on what should or should not be allowed in organic production and processing. When asked if each of the Big 3 ought to be allowed, 85, 80 and 76 percent said that GMOs, biosolids, and irradiation, respectively, should not be allowed; the remaining percentages replied either it should be allowed, no opinion, or don't know. Similarly, 63, 80, 95, and 76 percent say that manure from non-organic farms, antibiotics, growth regulators and confinement of animals, respectively, should not be allowed. All these practices are banned by the Final Rule.

Consumers are willing to pay more to avoid the Big 3 in organic foods. The mean and median premia they will pay for GMO-free organic food are \$0.75 and \$0.50. For biosolid-free, the mean is \$0.78 and the median \$0.50; for irradiation-free, the mean is \$0.75 and the median is \$0.50.

The auction also demonstrates a WTP to avoid GMOs in organic food. The bids (for both the third and final round, and the average bids over all three rounds) for the labeled and non-labeled chips were significantly different at the 95% confidence level; consumers bid more for the labeled chips. The mean difference for both the third round and the average round was \$0.40. Expressed as a percent premium (and excluding one extreme outlier observation), consumers would pay on average 95% more in the third round and 15% more in the average round.

Data from the surveys and experiment point to a lack of understanding of what exactly consumers are getting from organic food. Only 53% of auction participants knew that organic already implies GMO-free. Furthermore, a number of organic corn chip manufacturers have placed GMO-free labels on their packages along with the organic label, in spite of the fact that the GMO-free information is redundant. They clearly believe that the cost of this redundant label is justified by the increased sales it brings in. Perhaps the GMO-free label provides psychological incentive to buy the product among consumers who already understand the organic label's meaning, as one auction participant mentioned after the experiment.

The survey shows another area in which consumers may not fully understand the label's meaning. The Final Rule fails to provide a means of expressing in the marketplace certain values associated with organic agriculture. When asked why they buy or-

ganic, respondents commonly stated reasons such as concern about pesticide residues, the environment, and farm worker safety. Buying organic certainly contributes positively to these issues; however, many respondents also mentioned reasons such as support for sustainable agriculture and local food systems, and opposition to the "corporate" food system. The label, as a list of permitted practices, does not necessarily facilitate purchases reflecting these values.

Organic does not necessarily mean sustainable. Sustainable agriculture aims to address both the ecological and social problems associated with modern industrialized agriculture. But the organic label provides, at best, information on the environmental impacts at the production site. It does nothing to address pollution from transporting food over great distances, for example, let alone social-justice and community issues. Furthermore, with the entry into the organic market (and acquisition of once-small, independent organic firms) by large agri-business corporations, it is clear that buying organic does not necessarily imply supporting small family farms or a local sustainable food system, as many surveyed consumers stated.

Conclusions and Implications

If the purpose of the organic label is strictly to list practices which are or are not permissible, the Final Rule is broadly in accord with consumer preferences, according to a 2000 survey of organic consumers in Ithaca, NY. Results suggest that none of the practices banned in the Final Rule (especially the Big 3) ought to be reinstated.

However, consumer misunderstanding of the label's meaning points to a need for better communication if the label is to function optimally. The label could state the information itself, or refer to consumer-friendly web pages, toll-free numbers, etc. Fees from grower certification could be used to fund advertisements that promote organic, explain its benefits, and clarify the label's meaning.

Firms can use consumer aversion to the Big 3 as a promotional tool. Both the survey and auction indicate consumers will pay more to avoid GMOs. In a sense, consumers are getting this GMO-free trait "for free" when buying organic food, even though they are willing to pay extra for it. Promotions should highlight the GMO-, biosolid-, and irradiation-free traits and emphasize that buying organic

is the best way to avoid the Big 3. Growers can also tout their independence from the corporate food system and contributions to community development, social justice, etc.

The ability of the organic label to facilitate the expression of progressive values in the marketplace is more troublesome. One option is to incorporate social and broader environmental values into organic-certification requirements, although they would be difficult to quantify and implement. The USDA organic program is probably not the best way to accomplish this.

Many activists argue that another word is needed, one that incorporates the list of allowed practices along with the values associated with the origins of the organic movement. Such a new word could address the broader issues not covered by USDA organic, but would have to start from scratch to gain the public recognition, prestige, and understanding currently enjoyed by the word organic.

Qualifying firms could take greater advantage of existing labels and programs such as local, Fair Trade, "green," etc. Labeling systems that account for values not captured by existing programs need to be defined, developed and implemented. Activist, consumer, and producer groups should cooperate to promote products with these labels.

In general, steps are needed to allow consumers to access information that allows them to make purchasing decisions that reflect their values and to use the marketplace to shape the world as consumers as

well as citizens. Both the public and private sectors have key roles to play in this endeavor.

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