Consumer Willingness to Pay for Environmental Production Attributes in Tomatoes: A Southeastern Consumer Survey

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Introduction

Direct-to-consumer sales accounted for roughly 18.27 percent of the total food sales in the United States (Low and Vogel 2011), and farmers' markets increased by about 150.67 percent between 2002 and 2012 (U.S. Department of Agriculture, Agricultural Marketing Service, 2012). Local food consumption is often motivated by the buyer's perceptions of environmental and local economic benefits (Brown, 2003). Because there is no exact definition for "local," direct-to-consumer sales are one of the ways to identify local for research purposes. The Hartman Group (2008) and Zepeda and Leviten-Reid (2004) revealed that consumers viewed buying local had direct environmental benefits. Michaud et al (2013) found that consumers are willing to pay a premium for two environmental attributes, an eco-friendly cultivation condition label and a carbon footprint measure, associated with a non-food agricultural product, cut roses. While previous research has shown that consumers are willing to pay for specific environmental attributes of non-food products and that consumers do take environmental attributes into account for food products, are consumers willing to pay for specific environmental attributes of fresh food products?

Several studies (e.g. Thilmany et al., 2008; Carpio and Isengildina-Massa, 2009; Lusk and Briggeman, 2009) have found that consumers take the environment into account when making food purchasing decisions. Lusk and Briggeman (2009) determined that consumers value particular attributes of food, and some of the highest valued attributes are price, safety, and nutrition. When it comes to environmental attributes of various food products, most attributes generate a positive willingness to pay from consumers. Hunt (2007) found that through contact with producers at direct-sale locations, specifically at farmers' markets, consumers were able to express their preferences to producers, and the producers, in turn, indicated that they would be

willing to reduce chemical usage to meet consumers' demands. Thilmany et al. (2008) found a positive WTP for "environmental benefit" and that consumers are WTP more when the perception is that the food product supports a public good, for example, the environment. Straub and Thomassin (2006) found that consumers are WTP a price premium for products that have been produced using an environmental management systems. When consumers are willing to pay a premium for food products with specific attributes, producers could potentially charge a premium for these products therefore increasing potential profits.

Evaluating consumer willingness to pay for attributes is common in food products, but also in other products. Peterson et al. (2008) evaluated consumer WTP for attributes of wool products, while Michaud et al (2013) evaluated the WTP and the consumer demand for production attributes of roses. Evaluations of WTP are derived from decisions consumers make when purchasing an item.

Within one decision of whether to purchase a fresh food item, a consumer is faced with numerous decisions. The consumer will then choose based on different physical attributes of the item, evaluating characteristics such as price, quality, and firmness, which are easily evaulated. There are also some attributes that cannot be detected by examining the exterior of the product and require third-party labeling or speaking to an expert who is familiar with the production process, such as production location, pesticide usage, and water usage. A better understanding of why consumers purchase the products that they do and of differentiated market segments is essential to profitable product differentiation. Because each consumer values attributes differently, producers must identify dynamic marketing strategies that deliver the food products that satisfy consumers' wants. For example, if some consumers are willing to pay more for a

reduction in pesticide usage, farmers using less pesticides could target those consumers by publicizing the decrease in pesticides used in production.

Several studies (e.g. Onozaka and McFadden 2011;Dimitri and Greene 2002; Zepeda and Leviten-Reid 2004; Thilmany, Bond, and Bond 2008) have done research to determine whether consumers consider environmental impacts or production claims when purchasing food items. Production claims are claims from producers that deal with how food products are produced; some common claims are "organic," "local," and "sustainable." Onozaka and McFadden (2011) found that U.S. consumers were willing to pay $0.38 cents for local tomatoes over domestic tomatoes and -$0.69 for imported tomatoes from Mexico over local tomatoes. This study also found that consumers were WTP $0.12 for organic tomatoes as opposed to non-organic tomatoes and $0.64 for local and organic tomatoes. Thilmany et al. (2008) found that consumers who valued "environmental benefit" are WTP a 7.3 percent price premium for a local attribute when evaluating melons. Bougherara et al. (2009) found that "environmental considerations" played a role in consumers deciding whether to participate in a community supported agricultural program (CSA). Thomassin (2006) found that consumers are WTP about $0.03 for tomatoes produced using Environmental Management Systems and $0.06 for organically produced tomatoes

The objective of this study is to evaluate Southeastern consumers' attitudes towards environmental impacts that are directly related to the production of fresh foods, which are non-processed, non-packaged fresh items like produce. This will be done by estimating consumers' willingness to pay (WTP) for different environmental factors pertaining to vegetable production as they are related to food purchases, specifically fresh tomato purchases through the use of a choice experiment survey. In a world with diverse consumer preferences, it can be challenging for producers to determine marketing strategies and production practices that maximize their

profits while meeting consumer demand for regionally grown, perishable products. For producers who are looking for ways to increase profitability and differentiate their products, knowing consumer preferences and whether they are willing to pay price premiums to get preferred products could contribute to the producer's bottom line.

Little research has been done in the Southeastern region of the United States related to economic assessments of regional and local food marketplaces. Several studies (e.g. Ahearn and Sterns, 2013; Reynolds-Allie and Fields, 2011; Williamson and Woods, 2011; Carpio and Isengildina-Massa, 2009; Campbell, 2011; and Eastwood et al., 1999) have evaluated various topics pertaining to local and regional food systems, but little to no research has been done to assess the influence of specific environmental concerns on consumers' purchase of fresh food products. Some of the existing research in the Southeastern United States is centered around farmers' markets and farmers' market patronage (e.g. Williamson and Woods 2011; Eastwood et al. 1999). While others evaluate state branding programs (Carpio and Isengildina-Massa, (2009). Carpio and Isengildina-Massa (2009) found consumers are willing to pay a 27.5 percent price premium for South Carolina grown produce. Alabama restaurants' demand for locally grown food items is increasing with 51 percent of the surveyed restaurants currently buying local (e.g. Reynolds-Allie and Fields 2012). More recently, Ahearn and Sterns (2013) evaluated successful farms varied from other farms in direct-to-consumer outlets in the Southeastern United States using farm-level data from the Agricultural Resource Management Survey (ARMS).

However, while some of the afore mentioned studies have found that environmental factors influence decisions to buy fresh or local foods, there have been very few studies to determine consumers' preferences and valuations for specific environmental factors and environmentally-friendly production practices. For instance, Zepeda and Leviten-Reid (2004)

found that those consumers who did buy fresh food products directly from producers believed "that buying local products had direct benefits to the environment, to the local community, to farmers, and to their personal health," but there is little detail elicited about specific perceived benefits to the environment.

The existing literature on environmental impacts of food choices is limited to aggregated clusters of nondescript environmental factors. A choice experiment survey was implemented and respondent data were used to estimate the WTP for localness, reduced pesticide residues, reduced water use, and non-petroleum-based fertilizer. This study evaluates consumer's WTP for varying degrees of the attributes used in the production and harvesting process of commercial fresh market tomato production. Fifty-eight percent of the value of products sold in direct-to-consumer markets are fruits and vegetables (Martinez et al. 2010). Tomatoes were chosen as the produce item used in the survey because tomatoes are widely grown throughout the United States are consistently in the top five fresh vegetables purchased by U.S. households (USDA ERS 2012) and consumption of tomatoes are increasing (Lucier et al. 2000). A positive WTP for any of these specific attributes suggests that producers may benefit from a marketing strategy that focuses on promoting production practices that are consistent with consumers' preferences. A unique contribution of this study is the provision of WTP estimates for incremental changes in specific components during the production methods, as opposed to valuing fresh produce after complete conversion from conventional to organic production systems.

Conceptual Framework

We assume a random utility framework (McFadden, 1974) in which consumers will purchase the tomato if and only if the utility derived from the purchase is greater than the utility derived from another tomato option relative to not purchasing at all. We assume that utility is a

linear in parameters function of consumer characteristics, and tomato attributes such that the utility, u, of respondent i is:

(1) $$u_{ij} = \beta_0 + \beta_y y_i + \beta_x x_i + \beta_z z_j + \varepsilon_{ij}^c$$

where y_i is the income of respondent i, x_i are personal characteristics of respondent i, z_j are attribute levels of alternative j, and ε_{ij}^c is an iid error term with Type 1 Value, Gumbel, distribution . Under the random utility framework, we assume that a consumer will make a choice based on the attributes of the alternatives available that maximizes the respondent's utility such that the respondent will choose alternative j if and only if $u_{ij}^c \geq u_{ik}^c$ where $k \neq k \; \forall \; k, k = 1,2, \dots, K$.

Willingness to pay (WTP) is calculated as the ratio of the estimated coefficients to the price coefficient which is:

$$WTP = \frac{\beta_{z_j}}{Price}$$

where β_{z_j} is an attribute estimated coefficient and $Price$ is the estimated coefficient for the variable $Price$ which is the price of the tomato in each choice set.

Survey and Data

Prior to construction of the survey, two focus groups were held in Memphis, Tennessee. Focus group findings were used to identify the environmental concerns related to produce production practices and usability of choice experiment questions to be used in the survey instrument. The survey instrument was developed, approved by an Institutional Review Board, and pre-tested following Dillman et al. (2008).

Data for the study were collected using an online consumer survey in August 2013 hosted by Research Now. Research Now was contracted to design, host, and implement the online

survey. The sample includes residents in the states of Mississippi, Alabama, Georgia, Tennessee, Louisiana, Texas and Florida. Research Now analysts selected a demographically representative, age of 18 years or older, samples for a contracted total of 4,000 completed surveys. The surveys were distributed proportionally across the states based on the number of residents for each state, but were limited to the number of residents in the Research Now database. The respondents were screened for primary household shoppers who purchased fresh tomatoes at least once per month within the seven states stated earlier. The online survey was pretested with approximately 400 respondents to ensure usability and consumer responsiveness. Because the nature of the contract with Research Now, a response-rate cannot be calculated due to the required number of responses from each location, a common drawback associated with the use of survey companies.

The survey was designed to examine consumer willingness to pay for environmental impacts of fresh tomatoes along with estimating the significance of behavioral and demographic characteristics. Standard demographic variables suggested by existing literature are included in the survey questionnaire such as age, gender, education level, race, and number of people in household.

Choice Experiment Design

In a choice experiment survey, respondents are presented with two or more alternatives. They are asked to choose their more preferred alternative and the alternatives vary by levels of specific attributes and prices. The environmental attributes selected for inclusion in this study are localness (number of miles from farm to end user), amount of water used, fertilizer source (petroleum based versus organic), pesticide residues, and price. The specific environmental impacts were chosen through a review of previous literature and from the findings of two focus

groups. These attributes were alternated in different levels, where one of the levels serves as a base category.

Respondents of the survey were presented with three different options for the purchase of tomatoes, two tomatoes, each with a different set of attributes, and one option of "not purchase." The attributes along with different prices will be varied across respondents. Each respondent is asked to make four decisions with three different alternatives from which to choose. Each decision that a respondent makes translates to one choice observation. For instance, a total of 4000 respondents asked to make four decisions related to 16,000 choice observations.

While there is little to no guiding literature to help determine levels in which to vary some of these attributes, base levels for the selected attributes were determined by focus group feedback, best management practices outlines in Mississippi State 2013 Vegetable Planning Budget publication (Mississippi State University, 2012), and the U.S. EPA maximum allowable chemical residue protocols. The levels were also chosen based on a feasible range near the current levels or allowance. Organic production in the Southeast is relatively expensive due to year-round pests and disease pressures, which make a complete switch from conventional production to organic production difficult for producers. However, it is more feasible for producers to slightly alter some of the current practices to be more in line with consumers' preferences. An example of a choice question is located in Figure 1. The general choice question in Figure 1 is filled with different attribute levels for each choice. Table 2 shows the different variations of the attribute levels.

Distance between place of purchase and place of production were measured in miles, for example 100 miles, between where the product was produced and where it was sold. The levels for this attribute, fewer than 50 miles, 50 to 274 miles, and 275 to 400 miles were motivated by

findings in recent literature and policy. Onozaka et al (2010) found that when consumers were asked to define "local", 70 percent considered local to be produced within 50 miles. The 2008 Farm Bill defines local or regional food products as one that is "less than 400 miles from the origin of the product" or one that is "raised, produced, and distributed in…the State in which the product is produced." Alternatively, the FDA Food Safety Modernization Act (2010) defined a "qualified end-user" as "the consumer of the food or…a restaurant or retail food establishment…that is located…in the same State as the farm that produced the food or … not more than 275 miles from such farm."

Water usage was measured in gallons per acre. Respondents of the choice experiment survey were given an average water requirement for the Southeastern U.S. tomato production, and the alternative choices were varied for no decrease, 15 percent decrease, and 30 percent decrease. The industry average is based on the recommended water usage by the Traditional Vegetables 2013 Planning Budgets (Mississippi State University, 2012) for tomato production. To calculate water usage, one acre of tomato crop requires six acre-inches of water (about 27,154.3 gallons of water), and one acre of tomato crop holds about 4,400 plants (Mississippi State University, 2012). One acre produces 1600 boxes containing 25 pounds of marketable tomatoes. The industry average for one pound of marketable fresh tomatoes requires about 4 gallons of water in Southeastern states (Mississippi State University, 2012).

Fertilizer usage was varied by whether or not it was petroleum-based fertilizer or non-petroleum –based fertilizer. Focus group participants listed petroleum-based fertilizer as a concern when buying fresh products.

Pesticide residues were evaluated by percent decreased from the maximum chemical residue allowed by the EPA. In this experiment, the levels were 20 percent below maximum

allowable chemical residue, 40 percent below maximum allowable chemical residue, and 60 percent below maximum allowable chemical residue.

In each choice, the respondent could choose between a farmers' market tomato with a specific set of attributes, a grocery store tomato with a specific set of attributes, and neither tomato.

Results

A comparison of the sample to the 2010 U.S. Census data for each state reveals a fairly representative sample (Table 3). The median age of each state and the sample median age do differ. This is partially due to the requirement that each survey respondent be over the age of 18 and the primary shopper of the household. Variable descriptions and descriptive statistics of the model variables are provided in Table 4. Overall survey respondent household size includes an average of about 2.6 people, similar to the national average of 2.7 people per household (U.S. Census Bureau, 2011). While the sample is proportional to the total population of the states, Alabama residents made up 6 percent of the respondent sample while Texas made up 31.5 percent of the respondent sample (Table 5).

Estimation Results

An alternative-specific conditional logit model was estimated in Stata. Parameter estimates and willingness to pay estimates are presented in Tables 6 and 7, respectively.

The respondents are on average more likely to choose a tomato from a farmers' market over a grocery store tomato and more likely to choose a tomato from a grocery store over neither tomato. The respondents, on average, were more likely to choose a tomato that used 2.8 gallons of water per acre and one that used 3.4 gallons of water per acre compared to a tomato that used the average of 4 gallons of water per acre. On average, respondents are more likely to choose a

tomato that has 60 percent less pesticide residue than the maximum allowable chemical residue and a tomato with 40 percent less pesticide residue then the maximum allowable residue than a tomato with a 20 percent deduction in the maximum allowable chemical residue. Respondents are more likely to choose a tomato that was produced within 50 miles of the purchase location and between 50 to 274 miles from the production location over a tomato that was produced more than 400 miles from the production location, on average. Respondents are more likely to purchase a tomato that was not grown with petroleum-based fertilizer compared to a tomato that was produced with petroleum-based fertilizer. As expected, respondents are less likely to purchase a tomato as the price of the tomato increases, on average. Compared to purchasing a grocery store tomato, the omitted base category, males are less likely to purchase a farmers' market tomato than females. Older people are more likely to purchase neither tomato than a grocery store tomato, the omitted base category, younger people are.

Compared to a grocery store tomato, the respondents are willing to pay (WTP) $0.36 per pound more for a tomato from a farmers' market, on average. The respondents are, on average, WTP $0.44 more per pound for a tomato that was produced within 50 miles of the purchase location than a tomato produced between 275 to 400 miles away from the purchase location and are, on average, WTP $0.19 more per pound for a tomato that was produced between 50 to 274 miles of the purchase location than a tomato that was produced between 275 to 400 miles of the purchase location. When it comes to pesticide residues on fresh tomatoes, respondents are, on average, WTP $0.25 more per pound for a tomato with 60 percent less pesticide residues and $0.13 more per pound for a tomato with 40 percent less pesticide residues compared to a tomato with only 20 percent less pesticide residue than the maximum residue allowed by the EPA. Respondents indicated that they are, on average, willing to pay $0.10 for a tomato that uses 2.8

gallons of water per pound and $0.09 per pound for a tomato that uses 3.4 gallons of water per pound over a tomato that uses 4 gallons per pound. Respondents are, on average, willing to pay $0.42 more per pound for a tomato that is not grown with petroleum-based fertilizers as opposed to a tomato that is grown with petroleum-based fertilizers.

Summary and Discussion

Existing studies have demonstrated that consumers are interested in the environmental attributes of food and are willing to pay for environmental attributes of non-agricultural products. It is becoming more apparent that consumers are not only interested in tangible attributes of their food products, but they are also interested in the intangible attributes of their food, such as environmental benefits. This study found that Southeastern consumers are willing to pay a price premium for specific environmental factors: water conservation, reduced pesticide residue, fewer miles between production location and purchase location, and tomatoes grown without petroleum-based fertilizers. Results from this study also show that the respondents were willing to pay a price premium of $0.36 for a tomato purchased at a farmers' market over a tomato purchased at a grocery store.

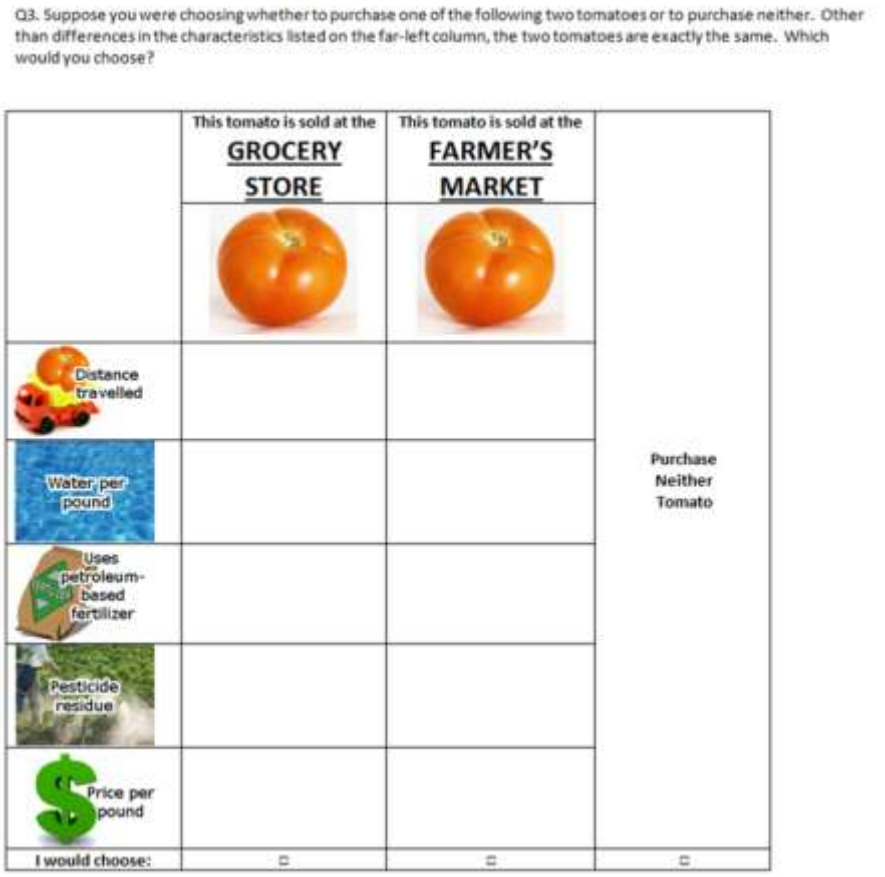
By incorporating consumer preferences , and more specifically the results of this study, into targeted marketing plans, producers could potentially increase profits, perhaps through the adoption of environmentally-conscience production methods, especially those attributes for which consumers may be willing to pay a price premium.

The results of this survey are beneficial to the regional tomato producers, possibly any specialty crop producers, who could incorporate some environmental practices into current production schedules that lead to the environmental attributes that were evaluated in this survey. These producers could be looking to expand production or differentiate their products at local

markets. Because organic production in the Southeastern United States is relatively more expensive due to year-round pest and disease pressures and limited access to organic production inputs, Extension outreach programs aimed at helping producers use these results to implement new or alter current farm practices to produce these results and to develop targeted marketing strategies that take the new practices into consideration.

It would be interesting to determine in further research if similar price premiums for these specific environmental production attributes would hold for other regions in the country. It would also be beneficial to determine if these same environmental production attributes would bring a price premium for other fresh market specialty crops like greens and berries, as well as value-added fruit and vegetable food products.

Figure 1. Choice Question Example



Note: blank spaces are filled with attributes when used in the survey.

Table 2. Attribute Levels Used in the Consumer Survey

Distance Travelled	Water Usage Per Pound	Petroleum-based Fertilizer	Pesticide Residue	Price Per Pound
Fewer than 50 miles	2.8 gallons per pound	No, this tomato was not grown using any petroleum-based fertilizer.	60 % below the maximum set by the EPA	$0.95
50 to 274 miles	3.4 gallons per pound	Yes this tomato was grown using petroleum-based fertilizer.	40 % below the maximum set by the EPA	$1.15
274 to 400 miles	4.0 gallons per pound		20 % below the maxiumum set by the EPA	$1.35
				$1.55
				$1.75
				$1.95

Table 3. Selected Survey Respondent Demographics Compared with 2009 U.S. Census Bureau Data by State

	Alabama		Florida		Georgia		Louisiana		Mississippi		Texas	
	Sample	**State**	**Sample**	**State**	**Sample**	**State**	**Sample**	**State**	**Sample**	**State**	**Sample**	**State**
Number	301	4.78 M	1060	18.8 M	1327	23.6 M	302	4.5 M	300	2.97 M	1416	25.1 M
Percent Female	54.3	51.5	51.3	51.1	54.8	51.2	50.2	51	51.3	51.4	45.3	50.4
Percent White	75.3	68.5	77.8	75	66.8	59.7	69.2	62.6	64.8	59.1	67.3	70.4
Percent Hispanic	2.9	3.9	17.5	22.5	5.7	8.8	1.7	4.2	2.1	2.7	32.8	37.6
Age (median years)	52	37.9	50	40.7	49	35.3	49.5	35.8	48	36	46.5	33.6
Income (mean)	70267	59273	62298	66,599	76380	67659	68430	62369	60777	54,176	78636	71651

Source: U.S. Census Bureau (http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml), Selected Economic Characteristics, Demographic and Housing Estimates, 2010, both recorded in the American Community Survey 1-year Estimates (U.S. Census Bureau, 2010)

Table 4. Variable Definitions and Descriptive Statistics

Variable Description	Type	Mean	Standard Deviation	Minimum	Maximum
Male [a]	Binary	0.479	0.5	0	1
Age	Continuous	47.93	16	18	108
Alabama Resident [b]	Binary	0.064	0.245	0	1
Florida Resident [b]	Binary	0.225	0.418	0	1
Georgia Resident [b]	Binary	0.282	0.45	0	1
Louisiana Resident [b]	Binary	0.064	0.245	0	1
Texas Resident [b]	Binary	0.301	0.459	0	1
The respondent is non-white [a]	Binary	0.31	0.462	0	1
Number in Household	Continuous	2.587	1.902	0	99
Respondent was born in the U.S. [a]	Binary	0.115	0.319	0	1
Household Income*	Continuous	71984	67388	5000	700000

[a] All binary variables equal 1 if the description is true, 0 otherwise

[b] The omitted base state is Mississippi

Note: *Household income was elicited in categories. The numbers represent the means of each category.

N = 50,601

Table 5. State Population and Sample Percentage

State	Population	Sample	% of Sample
Alabama	4,779,736	301	6.0
Florida	18,801,310	1060	23.6
Georgia	23,581,046	1327	29.5
Louisiana	4,533,372	302	5.7
Mississippi	2,967,297	300	3.7
Texas	25,145,561	1416	31.5
Total	79,808,322	4706	100

Table 6. Parameter Estimates of the Alternative-Specific Conditional Logit Model

Variable	Parameter Estimate	Standard Error
The respondent chose a Farmers' Market tomato (F)	0.451***	0.111
The respondent chose neither tomato (N)	-2.822***	0.268
The respondent chose a tomato that used 2.8 gallons of water per pound	0.12***	0.041
The respondent chose a tomato that used 3.4 gallons of water per pound	0.119***	0.031
The respondent chose a tomato that had 60% less pesticide residue than the maximum set by the EPA	0.313***	0.041
The respondent chose a tomato that had 40% less pesticide than the maximum set by the EPA	0.163***	0.028
The respondent chose a tomato that traveled fewer than 50 miles	0.557***	0.047
The respondent chose a tomato that traveled between 50 to 274 miles	0.237***	0.03
Price of the tomato chosen	-1.261***	0.043
The respondent chose a tomato that was not grown with petroleum-based fertilizer	0.534***	0.04
F x male	-0.126***	0.037
N x male	-0.223**	0.099
F x age	0.002*	0.001
N x age	0.012***	0.003
F x Alabama Resident	0.098	0.107
N x Alabama Resident	-0.067	0.265
F x Florida Resident	-0.217***	0.083
N x Florida Resident	0.126	0.21
F x Georgia Resident	-0.178**	0.08
N x Georgia Resident	0.219	0.204
F x Louisiana Resident	-0.212**	0.097
N x Louisiana Resident	-0.687**	0.299
F x Texas Resident	-0.176**	0.079
N x Texas Resident	-0.03	0.209
F x the respondent is non-white	-0.177***	0.041
F x the respondent is non-white	0.144	0.104
F x Number in Household	0.003	0.016
N x Number in Household	0.022**	0.01
F x respondent was born in the U.S.	0.109*	0.056
N x respondent was born in the U.S.	-0.133	0.157
F x Household Income	0.004	0.011
N x Household Income	-0.129***	0.029

Significance is denoted with *, **, ***, which correspond to 10%, 5%, and 1% significance respectively
N= 50,601 Log pseudolikelihood= -13913.043

Table 7. Willingness to Pay for Individual Variables

Variable	Willingness to Pay
The respondent chose a Farmers' Market tomato (F)	0.36
The respondent chose neither tomato (N)	-2.24
The respondent chose a tomato that used 2.8 gallons of water per pound	0.1
The respondent chose a tomato that used 3.4 gallons of water per pound	0.09
The respondent chose a tomato that had 60% less pesticide residue than the maximum set by the EPA	0.25
The respondent chose a tomato that had 40% less pesticide than the maximum set by the EPA	0.13
The respondent chose a tomato that traveled fewer than 50 miles	0.44
The respondent chose a tomato that traveled between 50 to 274 miles	0.19
The respondent chose a tomato that was not grown with petroleum-based fertilizer	0.42
F Alabama Resident	0.08
N Alabama Resident	-0.05
F Florida Resident	-0.17
N Florida Resident	0.1
F Georgia Resident	-0.14
N Georgia Resident	0.17
F Louisiana Resident	-0.17
N Louisiana Resident	-0.54
F Texas Resident	-0.14
N Texas Resident	-0.02

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