Journal of Agricultural and Applied Economics, 34,3(December 2002):477–487

Discovering Niche Markets: A Comparison of Consumer Willingness to Pay for Local (Colorado Grown), Organic, and GMO-Free Products

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Demand for value-added products is highly segmented among different types of consumers. In this article, we assess consumer preferences for local, organic, and GMO-free potatoes in order to discover their potential niche markets. We identify sociodemographic characteristics that affect consumer preferences and compare the effects of different attributes on consumers' willingness to pay. Results suggest that the attribute "Colorado grown" carries a higher willingness to pay than organic and GMO-free attributes.

Key Words: Colorado grown, GMO-free, local product, niche market, organics, payment card, willingness to pay

JEL Classifications: D12, Q13

The recent farming crisis nationwide associated with declining commodity prices and weather-related yield problems has forced farmers to find new markets for their commodities through value-added marketing. To discover the right niche market is a complicated task because demand is highly segmented among consumers who may be concerned with different attributes (such as local, organic, eco-labeling, and other specialty types). Baker deals with the case of market segmentation for apples, showing that there are different types of apple consumers, from those who are strongly concerned about food safety to those who are extremely price sensitive. The current study uses contingent valuation (CV) techniques to value different attributes and to identify sociodemographic characteristics that affect consumer response to such attributes. CV has been widely used in the consumer economics literature to value consumer response toward different attributes and food safety. Examples include Blend and Van Ravenswaay and Wessells, Johnston, and Donath.

We will focus our attention on the potato sector, addressing the issue of what message producers should convey to consumers in order to get the highest premium for their product. Potatoes are the most economically significant crop in the U.S. produce industry, providing farmers with nearly $2.7 billion revenue in 1999 (USDA-ERS). Colorado ranks as the fourth largest potato producing state in the United States (Colorado Department of Agriculture), with a production equal to 28,130 thousand pounds (about one fifth of the total crop of Idaho, the largest producer). The bulk of Colorado potatoes is currently produced in the San Luis Valley (SLV) in the southwestern

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part of the state. The growers in the SLV have been suffering from market prices that are lower than break-even points, a situation that has decreased grower profitability and sustainability over the past few years. Coupled with this is the manner in which potatoes are packaged and displayed relative to other crops such as vegetables and fruits, transmitting a low value-added image to the consumer. (Bananas, apples, tomatoes, prepackaged salads, and grapes have overtaken the potato as the star revenue generator in grocery stores nationwide [USDA-ERS].) In addition, consumers do not find the potato appealing in terms of nutritional value, appearance, or freshness.

Colorado potatoes are grown with all the necessary conditions to create a high-quality value-added product (including the use of environmentally friendly conservation techniques in the SLV that contribute to the disabling of many pests and reduction of pesticide usage). However, consumers are unable to differentiate the Colorado potato from the competition. As a result, producers are looking for labeling strategies to differentiate and create a niche for these local potatoes, increasing both sales and small operating margins. Within the limits of the case study described above, the objective of this article is to elicit consumers' willingness to pay (WTP) for a labeled value-added potato that could be marketed as organic, GMO-free, or Colorado grown. We will compare the corresponding consumers' WTP for these different attributes as well as the different sociodemographic factors that affect consumer response. A multiple bounded probit model will be used in this assessment to quantify factors affecting consumer preferences among organic, GMO-free, and Colorado-grown potatoes. In contrast with previous studies, consumers are asked to value a range of different attributes.

The following section of this article provides a literature review of niche marketing and product differentiation. The third section contains the methodology describing our WTP estimation of truncated data, which was collected using a payment card format. The data collection process and the corresponding descriptive statistics are reported in the fourth section. The fifth section of the article contains results of the parametric WTP, and the last section provides a conclusion and suggestions for further study.

Literature Review

Recently, niche marketing has become the focus of many studies that deal with consumer acceptance of value-added or differentiated products. In the marketing and business area, there are a large number of studies dealing with branding, product differentiation, and labeling issues. In this article, we restrict our attention to studies dealing with branding strategies identified for vegetable growers. A very relevant study that matches our own objectives was done by Nijssen and Van Trijp. They took a look at the agribusiness considerations needed to brand vegetables in The Netherlands. Their results suggest that both traditional success factors for building strong brands (i.e., order of market entry and level of promotional expenditures), as well as characteristics closely linked to the nature of fresh products (quality, shelf-life), are important.

Drawing from the consumer economics literature, there is a large body of studies dealing with consumer awareness and willingness to pay for local, organic, or environmentally friendly products. Many researchers have studied consumer demand for organic or other products with low or no pesticide usage.[1] Roosen et al. studied the consumer's valuation of insecticide use restrictions in the production of apples. Using an experimental action, they found that the average WTP for apples not treated with a particular group of pesticides was between $0.22 per pound in the first trial and $0.34 per pound in the last trial. Misra, Huang, and Ott found that 46% of Georgia consumers were willing to pay more for certified residue-free product.

Thompson and Kidwell analyzed the choice between organic and conventional produce using a two-equation probit model, showing that families with children were more

[1] See Thompson for a comprehensive review of studies on organic food demand.

likely to buy organic. Huang studied the demand for organically grown products, concluding that consumers who are nutritionally conscious, concerned about the use of pesticides, and wanting produce tested for freedom from residues would have a higher propensity to prefer organically grown products. These findings are comparable with the ones obtained in this article, where consumers concerned about nutritional value and freshness are more willing to pay a premium for organic products. Especially interesting for our study is the eco-label study conducted by Wessells, Johnston, and Donath. They emphasized that eco-label certification may work better for some fish species than others, stating higher subjective willingness to pay values for certified salmon than cod. In the same way, we presume that labeling programs associated with products of lower perceived value may not be efficient tools in stimulating demand.

There are very few studies that compare and analyze how consumers perceive different attributes associated with different labeling programs.[2] Nimon and Beghin identified a premium for organic cotton fibers, although the authors could not find evidence of a premium associated with environmentally friendly dyes. In another study, Govindasamy and Italia compared consumers' response toward traditional and an integrated pest management product. Their findings conclude that consumers with higher annual incomes were more likely to express an interest in purchasing an integrated management product and less likely to strictly purchase a conventional product.

Origin of the product (or locality) seems to be an important attribute needed to differentiate and create new niche markets, particularly for those products with a well-known reputation. Suryanata shows how Hawaii's foodstuff (pineapples and macadamia nuts) was able to capture a premium value of place-association due to the social construction of Hawaii as a "paradise" place. As a result, Hawaii has been very successful diversifying its agricultural base and marketing its produce as "exotic." Bastian et al. studied consumer interest in the diversity of products available from local craft brewers. Mass production by megabreweries provides craft brewers with the opportunity for niche marketing of differentiated beers in the Rocky Mountain region. Patterson et al. studied the acceptance of Arizona products and the "Arizona Grown" program, showing that consumers were largely unaware of this local promotional program, indicating, however, that they would prefer Arizona products if they had known about them. In a similar study, Jekanowski, Williams, and Schiek conducted a survey in Indiana about local products, showing that quality perceptions play an important role toward consumer acceptance of local products.

An interesting aspect of the current study is that it compares willingness to pay estimates and consumer response toward different product attributes, such as organic, GMO-free, and local, in order to find out their respective niche markets.[3] In addition, this study will also add to the small body of GMO-free valuation literature. The information gathered from this study should be helpful to producers in order to design the right marketing strategy to increase recognition of Colorado potatoes.

Multiple Bounded Probit Analysis

The survey elicited willingness to pay using a payment card format. Alberini showed that the interval data are often superior to the bivariate model of a dichotomous question with follow-up. The crucial valuation question was as follows: *Assuming fresh potatoes were priced at $1.00 per pound at your grocery store, how much of a premium per pound (in cents), if any, would you be willing to pay for fresh potatoes containing the following characteristics: GMO-free, organically grown, and Col-*

[2] Loureiro, McCluskey, and Mittelhammer presented differences in terms of consumer response toward organic, eco-labeled, and regular apples. However, they do not present estimates of willingness to pay associated with these different products.

[3] Notice that, at the time this study was conducted, the definition of organic production did not exclude the use of genetically modified seeds. Thus, both attributes were independent.

Table 1. Variable Definition and Sociodemographics

Variable	Description	Mean	Standard Deviation
Nutrition	Importance of nutrition for consumers: Likert scale from 1 to 5.	3.724	1.159
Fresh	Importance of freshness for consumers: Likert scale from 1 to 5.	2.872	1.177
Gender	Dummy variable, 0 = Male, 1 = Female.	0.603	0.537
Children	Dummy variable, 0 = No children under 18 years old living in the household; 1 = otherwise.	0.316	5.016
Income	Household's income level 1 = <$25,000 2 = $25,000–49,999 3 = $50,000–74,999 4 = $75,000–99,999 5 = >$100,000.	2.941	1.266
Age	Age of consumer.	44.38	15.180
Education Level	Highest level of education 1 = non/graduate 2 = high school 3 = some college 4 = associates degree 5 = bachelors degree 6 = masters degree 7 = doctorate.	3.147	1.454
Upper Class	Dummy variable capturing the cross effect of graduate education and household income over $75,000.	0.112	0.3157

orado grown? Consumers were presented with the following bid intervals: $0, less than five cents per pound, between 5 and 10 cents per pound, between 11 and 15 per pound, 16–20 cents per pound, and more than 20 cents (see Appendix). Frequency distribution of responses is presented in Table 3. With this survey data, a classical parametric willingness to pay estimate for organic, Colorado-grown, and GMO-free potatoes will be compared.

Cameron and Huppert developed a maximum likelihood framework that suits data gathered using a payment card. This multiple bounded probit model has been frequently used in the environmental economics and marketing literatures (see Cameron (1988) or Whitehead, Hoban, and Clifford). To motivate the model, we assume that the respondent's true valuation or willingness to pay (*WTP*) follows a linear function,[4] which lies within the

[4] The log-linear functional form explored by Cam-

Table 2. Comparison of Sample Sociodemographic Versus Colorado Population

Sociodemographics	Sample	Colorado Population[a]
% Female	60.3%	49.6%
% Household with children under 18 years of age	31.6%	35.3%
% High school graduates	79.58%	41.36%[b]
Median income	3 ($50,000–$74,999)	$40,853
Median age	44	34.2

[a] Source: Consumer Survey and U.S. Census Bureau.
[b] Persons of 25 years and over, 1990.

Table 3. Percentages and Distribution of the WTP Responses for the Different Attributes

Intervals	WTP for Organic: Percentage of Responses by Interval	WTP for Colorado Grown: Percentage of Responses by Interval	WTP for GMO-Free: Percentage of Responses by Interval
WTP = 0 cents per lb.	41.73	27.83	53.02
WTP $\subset$ 0–5 cents per lb.	14.84	19.45	15.56
WTP $\subset$ 6–10 cents per lb.	21.01	29.72	17.29
WTP $\subset$ 11–15 cents per lb.	11.20	10.54	7.20
WTP $\subset$ 15–20 cents per lb.	4.76	6.48	2.59
WTP > 20 cents per lb.	6.44	5.94	4.32

interval defined by the upper thresholds (t_{li}) and (t_{ui}) of the payment card. It is generally presumed that the expected willingness to pay, $E(WTP_i \mid x_i)$ is some function of the explanatory variables and associated parameters, $g(x_i, \beta)$, for which a linear-in-parameters form is computationally convenient. In the simplest case, we will have

$$(1) \qquad WTP_i = x_i'\beta + \varepsilon_i,$$

where WTP_i is an indicator variable for the latent (nonobservable) WTP value. Further, x_i' is a vector of explanatory variables that potentially affect consumers' willingness to pay for different potato attributes, including sociodemographic characteristics of the respondent, such as age, the presence of children in the household, income level, education, and importance of quality of the product (represented here by the importance of freshness and nutritional values), and β is the vector of corresponding coefficients. Finally, ε_i is normally distributed with mean zero and standard deviation σ.

We can standardize each pair of interval thresholds for (WTP_i), expressing the probability that the true valuation lies between both thresholds as

$$(2) \qquad \Pr(WTP_i \subseteq (t_{li}, t_{ui})) = \Pr((t_{li} - x_i'\beta)/\sigma < z_i < (t_{ui} - x_i'\beta)/\sigma)),$$

where z_i is the standard normal random variable. Therefore, after this transformation, the probability expressed in equation (2) can be rewritten as the difference between two standard normal cumulative distributions functions (CDFs) and is expressed as

$$(3) \qquad \Pr(WTP_i \subseteq (t_{li}, t_{ui})) = \Phi(z_{ui}) - \Phi(z_{li}).$$

Thus, the likelihood function is given as

$$(4) \qquad \log L = \sum_{i=1}^{n} \log[\Phi(z_{ui}) - \Phi(z_{li})].$$

The estimation of this likelihood function will make it possible to draw conclusions about how consumers value perceived quality of potatoes (in terms of freshness and nutritional value) and how these attributes and consumers' sociodemographic characteristics affect their willingness to pay. Estimation of this likelihood function is conducted using the software package LIMDEP. First- and second-order derivatives are not presented here because of space limitations.

Data

Data were gathered from a survey conducted during the fall of 2000 in different locations of the state of Colorado. A pretest of the survey was conducted with the board members of the Colorado Potato Administration Committee of the SLV. Some of their general comments and suggestions were then included in the final draft of the survey. Students from the National Agribusiness Marketing Association (NAMA) at Colorado State University con-

eron and Huppert assumes that WTP is restricted to be positive. In our particular case, because we have bids that equal zero, we do not restrict the WTP estimate to be positive.

ducted the surveys in supermarkets such as King Soopers, Albertson's, Super Wal-Mart, and Safeway stores in Fort Collins, Greeley, Parker, and Denver. Consumers were randomly solicited in the produce section and asked for their voluntary participation in the survey. In total, 437 questionnaires were collected. Data were collected in a supermarket setting, where consumers were instructed at the beginning of the survey that they could ask any question about attributes they would be valuing. Additional information was provided in a systematic way, with the interviewer reading a paragraph to each consumer. Consumers were provided with a definition of GMO-free food as food that has been manufactured, prepared, preserved, or packaged not containing microorganisms that had genes transferred from other species into their genetic material. The definition of organic referred to a natural agricultural system of growing food that excludes synthetic pesticides and nonnatural fertilizers. For the third attribute in question, Colorado grown, consumers intuitively understood its meaning, and none asked for additional information. Incomplete questionnaires, where the valuation questions were not answered, were excluded from this analysis.[5]

The survey was divided into four sections. Section I focused on general consumption patterns and potato attributes that consumers found important, including the premium that these consumers were willing to pay for various attributes. Section II dealt with nutrition issues and what would prompt consumers to purchase more potatoes. Section III asked questions about biotechnology, and the last section provided demographic information with which to develop a target audience.

As summarized in Table 1, 60% of the respondents were female, and the mean age of the sample was 44 years. The mean education level indicates that respondents had "some" years of college, with almost half of the respondents earning a bachelors degree or higher. Thirty-one percent of the respondents had at least one child in their household, with over one half of the respondents having none. Finally, among the respondents of the income question, the mean income earned in the year 2000 was about $50,000. When comparing these figures with the Colorado Census (U.S. Census Bureau), as in Table 2, we see that our sample is 10 years older, with higher income levels and a higher percentage of females. Although the higher percentage of females is desirable because they are the ones making most of the purchasing decisions in the household, it is difficult to assess the effects associated with an older population with higher incomes in our results.

As in all surveys, a representative sample is always of concern to the researcher. There could be some degree of sample selection bias in which respondents who were more interested in organic, Colorado-grown, or GMO-free products elected to participate in the survey. In the current study, participation was estimated to be about 40% of the total solicited population. Research conducted by Edwards and Anderson found significant differences between the characteristics of survey respondents and nonrespondents. Finally, Messonnier et al. examined sample nonresponse and selection biases, finding out that unit nonresponses seriously affected welfare measures. In our study, because we do not have any information regarding the nonrespondents, we cannot assess the impact of sample selection biases on our WTP estimates. Given the preceding observations, we acknowledge that our findings are limited in their ability to be applied to a fully generalized broader population.

Model Specification and Variable Definition

The WTP equation depicted in equation (1) has been estimated independently for each attribute (organic, GMO-free, and Colorado grown) using a common set of independent variables. This was done to facilitate a comparison among the different sociodemographic factors that characterize the niche markets for

[5] This fact reduces the number of usable observations to 353, 343, and 367 for the valuation of organic, GMO-free, and Colorado-grown attributes, respectively.

Table 4. Willingness to Pay Regressions for Different Potato Attributes

	Organic		GMO-Free		Colorado-Grown	
Variables	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Constant	3.226*	0.069	2.228	0.160	3.599*	0.052
Age	−0.040*	0.100	−0.034	0.126	−0.019	0.445
Upper Class	2.389***	0.032	2.603*	0.008	0.560	0.627
Female	0.132	0.855	0.701	0.280	0.820	0.279
Children	−0.163	0.812	0.238	0.711	−1.087	0.150
Fresh	0.884**	0.008	0.672**	0.025	0.279	0.421
Nutrition	0.647**	0.043	0.557*	0.052	1.086**	0.002
Sigma	5.588***	0.000	4.926***	0.000	5.921***	0.000
Log-likelihood	−422.136		−382.105		−440.56	
N	273		266		277	

Note: ***, **, and * represent statistically significant coefficients at $\alpha = 0.001$, $\alpha = 0.05$, and $\alpha = 0.1$, respectively.

the organic, GMO-free, and Colorado-grown potatoes. The final specification of the WTP equation is as follows:

$$(5) \quad WTP_i = \beta_0 + \beta_1 Age_i + \beta_2 UpperClass_i + \beta_3 Female_i + \beta_4 Children_i + \beta_5 Fresh_i + \beta_6 Nutrition_i + \varepsilon_i,$$

where *Age* is a continuous variable representing respondent's age, *UpperClass* is a dummy variable that captures the cross effect of those consumers with graduate levels of education and income levels over $50,000 per year, *Female* is a dummy variable that represents a female respondent, *Children* is a dummy variable that represents the presence of children in the household, and *Fresh* and *Nutrition* represent the subjective importance that consumers place on both attributes when shopping for produce (See Appendix for question). Both variables are measured in a Likert scale from 1 to 5, with 1 being the least important. Summary statistics and a definition of the variables included in this equation are presented in Table 1.

Results

WTP Estimates

As we can see in Table 3, the frequencies or percentages associated with the WTP intervals for the different attributes of potatoes have a negative slope. As demand theory would predict, the higher the bid amount (or in this case, the amount contained in the interval of the payment card), the lower the percentage of affirmative responses to the WTP question. The large percentages of the distribution located in the lower-end levels of the WTP curve seem to reflect the potato's association with poor food nutritional value.[6] This health concern surrounding the potato is supported by our results because the elicited mean WTP estimates for the different potato attributes are fairly small. As a final note, it is also interesting that the attribute "Colorado grown" seems to carry a higher premium than either the organic or GMO-free attributes.

Mean WTP for the different attributes was estimated using the model results presented in Table 4 and evaluating the coefficients at the corresponding means of the independent variables. Confidence intervals were estimated using the formula presented by Cameron (1991). The different premiums carried by the different attributes and their corresponding 95% confidence intervals are presented in Ta-

[6] Some current studies reported in the popular press suggest that people who regularly eat foods with a high glycemic index may actually increase the risk of developing insulin resistance, a situation that can actually lead to an increased risk of diabetes or even heart disease (Woods). Unfortunately, at the very top of the glycemic index is the baked potato (Wolever, Foster-Powell, and Colagiuri).

Table 5. WTP Estimates and Corresponding 95% Confidence Intervals (CI)

WTP	Mean WTP Estimate (cents per lb.)	CI[a]
WTP for organic potatoes per lb.	6.64	(6.357, 6.977)
WTP for GMO-free potatoes per lb.	5.55	(5.244, 5.826)
WTP for Colorado-grown potatoes per lb.	9.37	(9.055, 9.693)

[a] Following Cameron (1991), confidence intervals for the predicted mean WTP estimate can be obtained as $CI_{95}[E(\overline{WTP})] = \bar{X}'\hat{\beta} \pm t_{.025}\,(\bar{X}\sigma^2\,(X'X)^{-1}\,\bar{X})^{1/2}$.

ble 5. According to our results, locally grown potatoes carry a potential premium of about 9.37 cents per pound over the initial price of $1 per pound—or about a 10% premium. This may be due to the fact that Coloradoans appreciate a locally grown product even though it may currently lag far behind other fruits and vegetables with respect to good marketing of value-added characteristics. Colorado agricultural promotion campaigns, such as "Colorado Proud," may have an impact on consumer purchasing patterns. In addition, it is possible that "Colorado grown" attributes are better understood by consumers than those of GMO-free and organic even though information was provided for the latter two attributes. In light of these results, it seems reasonable to think that the largest niche market for Colorado potatoes is actually related to its locally grown nature. This finding can be used by the local potato sector to better market Colorado-grown potatoes. Currently, as previously stated, there is little or no labeling recognition associated with this local crop, unlike that of the well-known Idaho Russet Burbank.

The fact that the WTP estimates for the organic and GMO-free attributes are 6.64 cents per pound and 5.55 cents per pound, respectively, shows the difficulty of creating differentiated markets for potatoes. Value-added attributes, such as organic or GMO-free labeling, seem to be very effective marketing mechanisms for the vegetable and dairy markets, but this strategy may not be generalized to the potato sector. In the eco-label industry, Wessells, Johnston, and Donath pointed out that eco-labeled certification may work better for some fish species than for others. This also seems to be the case with organic and GMO-free labeling programs of fruits and vegetables.

Regressions reflecting sociodemographic factors and quality characteristics affecting WTP are presented in Table 4. With respect to the organic WTP equation, consumers concerned about freshness and nutrition (represented by the variables *Fresh* and *Nutrition*) are willing to pay more for organic potatoes. This fact reflects that organic consumers tend to be concerned about food safety. In addition, the age of the consumer (*Age*) seems to have a negative effect on the willingness to pay for organic potatoes. Specifically, as people age 1 year, they are willing to pay 0.04 cents less for each pound of organic potatoes. Studies such as Loureiro, McCluskey, and Mittelhammer found that, when comparing consumer choices between organic, eco-labeled, and regular apples, older consumers were more likely to choose regular apples because they were less generally concerned about the impacts of pesticides in the environment or food. The variable *UpperClass* is positive and statistically significant, implying that consumers who are wealthy and well-educated are, on average, willing to pay about 2.39 cents more per pound to obtain organic potatoes. This finding is in concordance with Huang's article, which showed that more health-conscious and educated consumers were willing to pay more for organic.

It is surprising that the presence of children in the household has a negative (although not significant) effect on the WTP for the organic and Colorado-grown attributes considered. This negative effect on WTP could be explained because, overall, families tend to have less disposable income to use for additional

premiums. Also, on average, consumers are more concerned about the use of pesticides in the case of other fruits and vegetables, which are more often eaten raw. Potatoes, however, are usually cooked before serving, a process that may reduce the perceived risk of pesticides. The variable *Female* is not significant either in any of the three WTP regressions. However, we left it in the model as an indication that female consumers do not care about value-added attributes in fresh potatoes.

The GMO-free willingness to pay equation seems to be explained by similar factors as found in the organic niche market. The variable *UpperClass* has a positive and statistically significant effect on the WTP for GMO-free products, while the importance of freshness and nutrition (represented by the variables *Fresh* and *Nutrition*, respectively) carry both positive and statistically significant effects on the premiums that consumers are willing to pay. The variable *Children* is positive but not statistically significant. Overall, organic and GMO-free producers may target the same consumer segment made up of wealthier and more food safety-conscious individuals.

We found some interesting results with respect to locally grown potatoes (Colorado grown). Consumers were willing to pay the highest premium for Colorado grown, but the statistical results indicate that consumers' concern about nutrition (*Nutrition*) is the only variable that has both a positive and statistically significant effect on willingness to pay for Colorado-grown products. This would indicate that, although consumers are willing to pay for home grown, it must be linked to a certain quality (as indicated by Jekanowski, Williams, and Schiek) to garner the higher premium of 9.37 cents per pound. The need for a better Colorado image is further demonstrated by the results of the variable *UpperClass*, which, although positive, is not significant. These results have strong implications for the Colorado potato sector. Although wealthier and more educated consumers are willing to pay a premium for organic and GMO-free potatoes, they are not willing to pay a premium for Colorado-grown potatoes.

Conclusions

In this article, we assess consumer response toward organic, GMO-free, and "Colorado grown" potatoes to identify the best niche market for the Colorado potato. At the present time, Colorado producers are trying to find a way to create a niche market for Colorado potatoes. A random sample of consumers was interviewed in Colorado and data were analyzed using a multiple bounded probit model that fits payment card data. Willingness-to-pay estimates show a higher premium for the "Colorado grown" attribute. We concluded that the "Colorado grown" attribute affords the potato producer with the highest consumer acceptance and premium (relative to organic and GMO-free). This finding can be useful for Colorado potato producers who are looking for new ways of both improving their product image and increasing consumer awareness of Colorado potatoes. For further studies, it may be beneficial to learn whether these findings hold for other products (or even for processed potatoes) as well as other geographical areas around the country.

[Received July 2001; Accepted January 2002.]

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Appendix

Questions used in the survey to elicit willingness to pay for potato attributes:

Assuming fresh potatoes were priced at $1.00 per pound at your grocery store, how much of a premium per pound (how many cents per pound), if any, would you be willing to pay for fresh potatoes with each of the following characteristics (please circle one):

	Premium per pound					
Organically grown	*None*	*<5*	*5–10*	*11–15*	*16–20*	*>20*
GMO-free	*None*	*<5*	*5–10*	*11–15*	*16–20*	*>20*
Colorado grown	*None*	*<5*	*5–10*	*11–15*	*16–20*	*>20*

Questions regarding importance of attributes:

Rank the following characteristics of fresh potatoes in making your purchase decisions by circling a number corresponding to the level of importance of that characteristic:

	Not important				*Important*
Freshness	*1*	*2*	*3*	*4*	*5*
Nutritional value	*1*	*2*	*3*	*4*	*5*