

The Relationship Between Consumers' Level of Exposure to Food System Issues and Their Willingness to Pay for Domestic Fair Trade Food.

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According to the Organic Trade Association's 2011 Organic Industry Survey, organic sales in 2010 increased by 7.7 percent over 2009 sales. Organic recently took up 4 percent of the entire United States food and beverage industry, including 11 percent of all fruit and vegetable sales. The total sales generated by the organic industry came out to \$28.682 billion in 2010, up 9.7 percent from 2009. (Vilsack et al 2010) (OTA 2011) Despite massive growth in this industry, fair labor practices in organic farming continue to lack priority. Economic and environmental concerns are the main push behind this growth, with "sustainable" labor practices occupying a distant third in United States organic production and marketing. Despite international emphasis on fairness in labor practices, the organics industry in the United States has yet to solidify a set of standards for equitable farmworker treatment and compensation as an aspect of organic certification. The United States Department of Agriculture focuses solely on ecological tenets of organic farming in its certification requirements. The international commitment to fair labor practices as a basic component of organic agriculture contrasts with that of the United States.

IFOAM, the International Federation of Organic Agricultural Movements, recognizes the principle of fairness as one of four main tenets of organic production. This principal of fairness is defined as a way to guarantee equity at all levels of production and distribution. This principal insists that ensuring a good quality of life and pursuing the reduction of poverty among all participants are necessary for the organic industry to be truly sustainable. Internationally, fair labor practices are just as important as ecological concerns. (IFOAM 2009)

The 2008 Organic Production Survey conducted by the National Agricultural Statistics Survey found that close to 20 percent of the United States' organic and exempt farms were located in California, with 2,714 out of 14,540 of the country's organic farms. Consequently, much of the most notable research on labor practices on organic farms has been conducted in California. The California Institute for Rural Studies contacted over 1,800 organic farms to obtain 300 interviews. Their findings showed that while organic farms were more likely to offer higher wages, production bonuses, and non-standard benefits like access to food from the farm, they fell behind conventional farms in other key benefit categories including retirement plans and health insurance. (Strochlic et al 2008)

The CIRC's study of organic farms in California found that organic farming practices require a larger number of laborers per acre on average. Additionally, overall production expenses were higher on average for organic farms when compared with all farms nationally, with labor occupying the largest portion of these expenses. Despite the cost premium achieved by organic certification, many organic farmers report an inability to institute conventional benefits. Instead, many organic farms provide non-standard benefits such as year round employment, more opportunities for permanent employment,

access to food from the farm, and higher starting wages. Survey respondents emphasized retention as being of key importance. The benefits of high levels of worker retention were listed as less training costs, fewer accidents and avoiding labor shortages. The average U.S. farmworker is only employed for 24.4 weeks of the year. In order to provide year round employment and guarantee a consistent paycheck, many organic farms reported increasing crop diversity as well as employing farmworkers in tasks not directly agricultural including maintenance and upgrades of farm facilities. (Shreck et al 2005)

A correlation was noted between farm size and the likelihood of providing health insurance and retirement benefits. Farms with larger revenues, organic or conventional, were able to offer more benefits. Occasionally, farmers reported workers preferred farms with higher pay to those that offered benefits. An effort to communicate the value of benefits as part of an overall compensation package is needed to convince workers not to choose where to work simply based on hourly wages. (Villajero et al 2000)

The CIRC study found that over 50 percent of farms surveyed had either formal training or an informal system for ensuring that workers were treated with respect. 59 percent of those surveyed reported an interest in fair labor certification and the cost premiums it would bring their products. A direct correlation was found between a larger percentage of total organic acreage and an interest in fair labor certification. (Villajero et al 2000)

Other important factors to consider involve the customer base for organic products. 74 percent of organic farms sell to customers less than 500 miles away. 7 percent of organic food sales go direct to market, while only 1.6 percent of total U.S. produce sales are sold in the same manner. (OTA 2011)

The purpose of our study is to understand the attitudes of southern consumers towards organic food and fair trade food, to gauge their awareness of food system issues, particularly farm labor issues, and to assess the degree of action that they take in response to these issues. We also want to understand the priorities held by southern organic farmers, the challenges they face, and the decisions they make in regards to labor practices.

There are two groups of subjects who are investigated in this study. Firstly, organic farmers were surveyed in an effort to gain an understanding of their priorities, challenges and practices. Their results will be outlined with descriptive statistics. Secondly, the general public was addressed in more detail in an effort to answer an overarching question: Is there a relationship between people's knowledge on agriculture issues and their priorities and actions when making food purchasing decisions? We will divide this second query into three main questions:

- What is public's Exposure about fair working conditions/farmworker quality of life?
- What is public's priorities about fair working conditions/farmworker quality of life?
- What is public's priorities about Support for fair working conditions/farmworker quality of life?

Finally, we hope that the answers to these three questions will reveal correlations between people's exposure to agriculture issues and their shopping priorities or their support for certain social justice

stances. Also, we will look for possible correlations if any between people's shopping priorities and their support for different social justice stances.

Methodology:

Our analysis is based on responses to two different surveys: One which targeted the members of the public in the specific cities in the southeastern US, and the other which was sent to a random sample of certified organic farmers all across the southeastern US. The majority of the general public surveys were made available at information tables set up by Florida Organic Growers at various events, social functions, and other locations in Gainesville, Florida (FOG's headquarters), with some additional surveys completed in Apopka (Farmworker Association of Florida headquarters), and at a co-op grocery store in Pittsboro, NC (The Rural Advancement Foundation headquarters). Over the course of these and other tabling efforts, 266 surveys were fully completed by the general public. This survey tried to ascertain people's shopping habits, priorities and limitations, along with demographic information. The survey also attempted to gauge the public's exposure to issues of fairness and sustainability in the food system. In the case of the Farmer/Rancher survey, 400 anonymous surveys were sent out through regular mail to a random sampling of certified organic farmers across the southeastern US with an incentive of an option to be entered into a raffle. A paid-postage envelope was included with each written survey, and the surveys were designed to take 10 minutes to fill out. Florida Organic Growers received 52 completed from farmers who represent a diversity of farm size and crop types. The farmer survey gathered similar demographic information to the public survey, along with information about farm size, type of production, labor, wages, years farming, buyers, and income. We also asked organic farmers about the challenges they faced in the marketplace, and about the types of marketing techniques that were successful for them. Both of the surveys included mostly multiple choice questions in order to facilitate higher response rates and the collected data is mostly nominal and ordinal. Therefore, our analysis is largely descriptive for both the public and farmer surveys. In addition to basic descriptive statistics, cross tabulation and the Chi-Squared Test were used to uncover possible relationships between the public's level of exposure to food system issues, their priorities, and their actions.

The public's priorities about the food system were gauged through a series of specific questions, which allowed them to rank how they prioritized each issue on a scale from 1 to 5. In addition, people were asked to indicate barriers that stopped them from food shopping in a way that is completely in line with their priorities.

We were able to look further into people's priorities by asking whether or not they purchase organic food, and their reasons for doing so if they did. Similarly, we asked if they purchase fair trade food, and if so, which products.. We also asked respondents about their knowledge of the treatment of farmworkers under the Fair labor Standards Act, and if workers on organic farms were treated more fairly. Respondents were also asked to select elements they felt should be included in domestic fair trade. Furthermore, respondents were able to write-in additional requirements if they felt the available options were inadequate or misguided.

We explored respondents' exposure to issues of fairness for farmers and workers and other food system issues through a series of questions about food related films they had seen, news stories about workers and farmers, and knowledge or membership in community supported agriculture. We also asked if they have heard of the Agricultural Justice Project and if they had seen the Food Justice Certification mark. In an effort to understand people's level of exposure in relation to their priorities and actions, we summarized their exposure into a degree of exposure index (DEI), which offered us an ordinal statistic to use in cross tabulations. It should be noted that this index is arbitrary and has no stand-alone value. Due to the possibility that seeing a film might influence respondents' awareness of the other issues, this question was left out of the DEI.

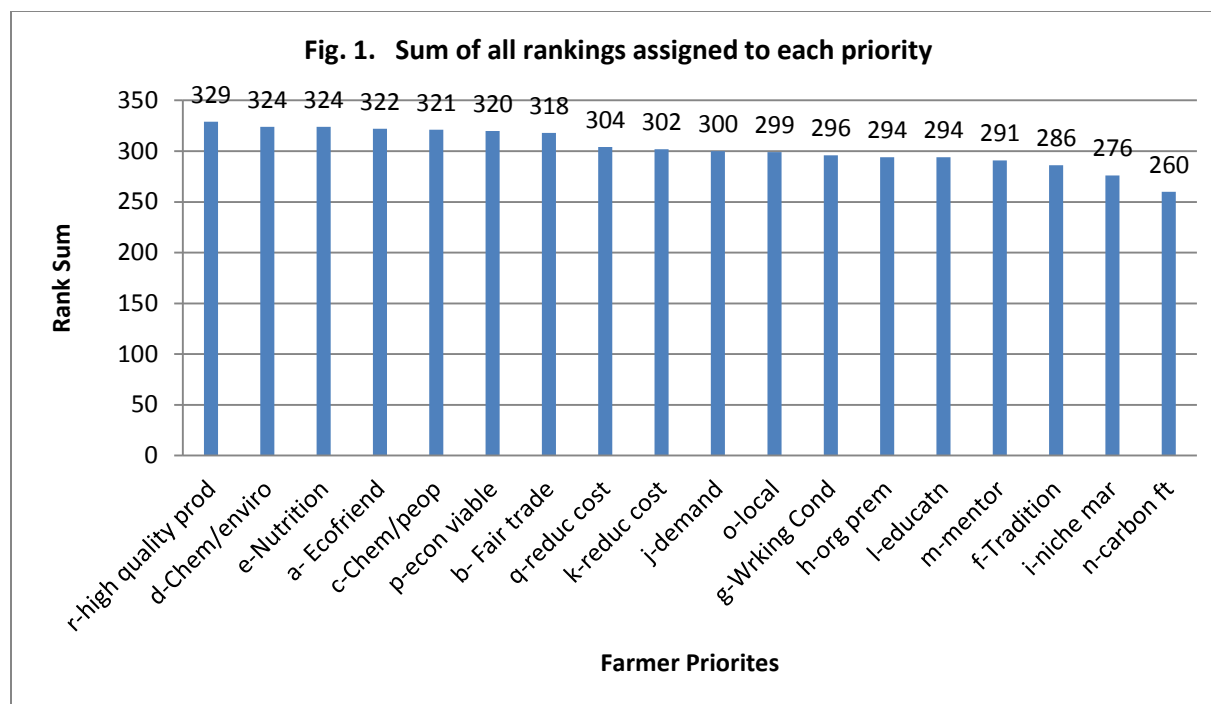
Finally, we attempted to gauge people's actions in relation to supporting sustainable agriculture. Primarily, the aforementioned questions as to whether or not they purchase organic or fair trade food and if they are members of a CSA is considered an indicator of action taken. Amounts and frequencies of organic or fair trade shopping habits were not recorded. Finally, the survey asked a willingness to pay question for a hypothetical gallon of domestic fair trade milk. We offered a market price value for conventional milk, and offered them a range percentages and dollar values that they would be willing to pay over the market price for conventional milk. They were also offered the option to write in a higher price if they were willing to pay it.

A regression model was created based on possible relationships exposed through cross-tabulation between demographic variables and variables which attempt to gauge the public's exposure and actions. The resulting ordinal regression model rejects the null hypothesis that there is no relationship between our sample's degree of exposure and their willingness to pay. It also implies that certain demographic variables like income, age, and ethnicity may be related to our participants' willingness to pay for domestic fair trade food.

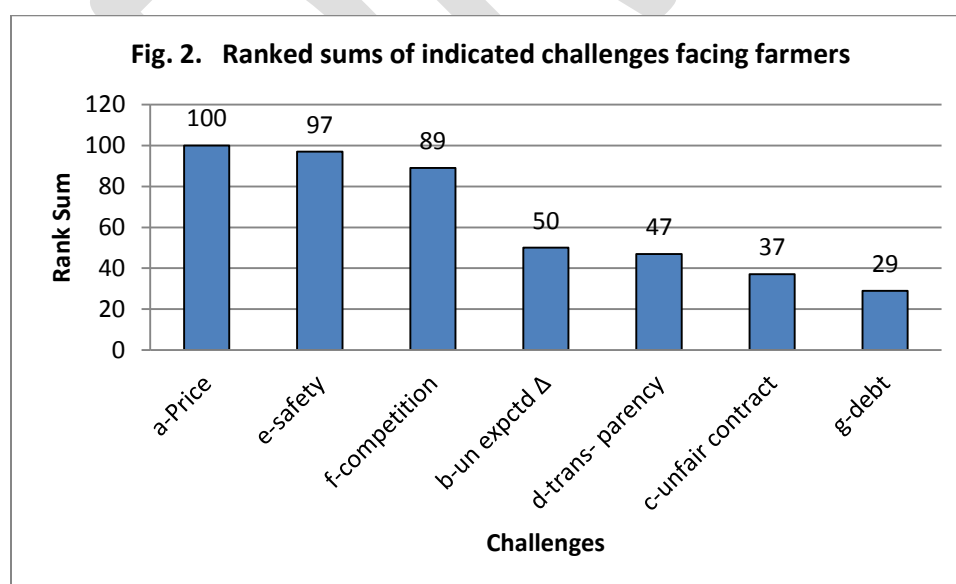
Descriptive Results

Farmer/Rancher Survey

Producing a high quality product was the farmers' highest priority by both average ranking and sum ranking. Chemical impact on environment and nutrition of food were tied for 2nd in both cases. Eco friendliness came in 4th, and chemical impact on people came in 5th. The farmer's responses suggest that of the options listed, their greatest concern was to grow high quality, healthy foods that have minimal impact on the environment from a chemical standpoint. Interestingly, reducing their carbon footprint was the least frequently selected priority, suggesting that farmers have a complicated stance on environmental issues. Providing good working conditions was ranked roughly in the middle among the 18 priority questions asked. The sum of all rankings assigned to each priority are by all participants are illustrated in Figure 1. Although there are slight differences in how farmers prioritized each issue, all of the categories received relatively high ranks.



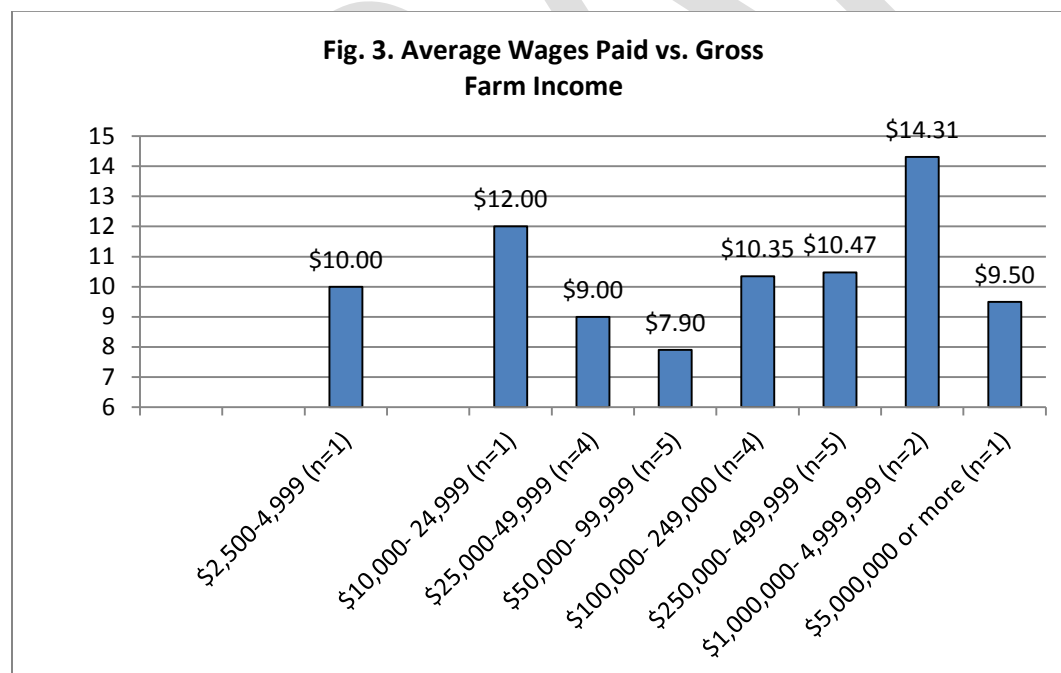
After questions about their priorities, farmers were asked to rate their severity of the challenges they faced from major buyers on a scale from 1 to 5 from a provided list of 7 challenges. When averaging the ratings of each challenge, safety was the highest challenge, followed by prices. These two rankings switched places when looked at in terms of sum ranking. Competition was 3rd in both cases. Debt was the least severe challenge, followed by unfair contracts in 6th place. Figure 2 shows these results.



Next, we will briefly summarize labor usage of the participating organic farmers. The most widely used types of labor used were volunteers and interns, each utilized by 82% the farmers. Family and household labor was utilized by 62% of respondents, and 53% of farmers reported to use non-family labor. In regards to the actual frequency of laborers on the farm however, farmers utilized on average 6.77 non family laborers, followed by 2.39 family members. There was an average of 1.92 volunteers on participating organic farmers, and 1.29 interns.

The average income received by organic farm laborers was \$8.18/hour when including unpaid family laborers. When considering only at paid labor, however, average wages were \$11.76/hour. This number is only slightly higher than the national average of \$11.17/hour for farmworkers in 2011, and \$11.13/hour in 2010. However, when considering just the regional southeast, farmworkers earned \$9.53/hour in the southeast and \$10.65/hour in Florida in 2010. In 2011, they earned \$9.78/hour in the southeast and \$11/hour in Florida (NASS, USDA).

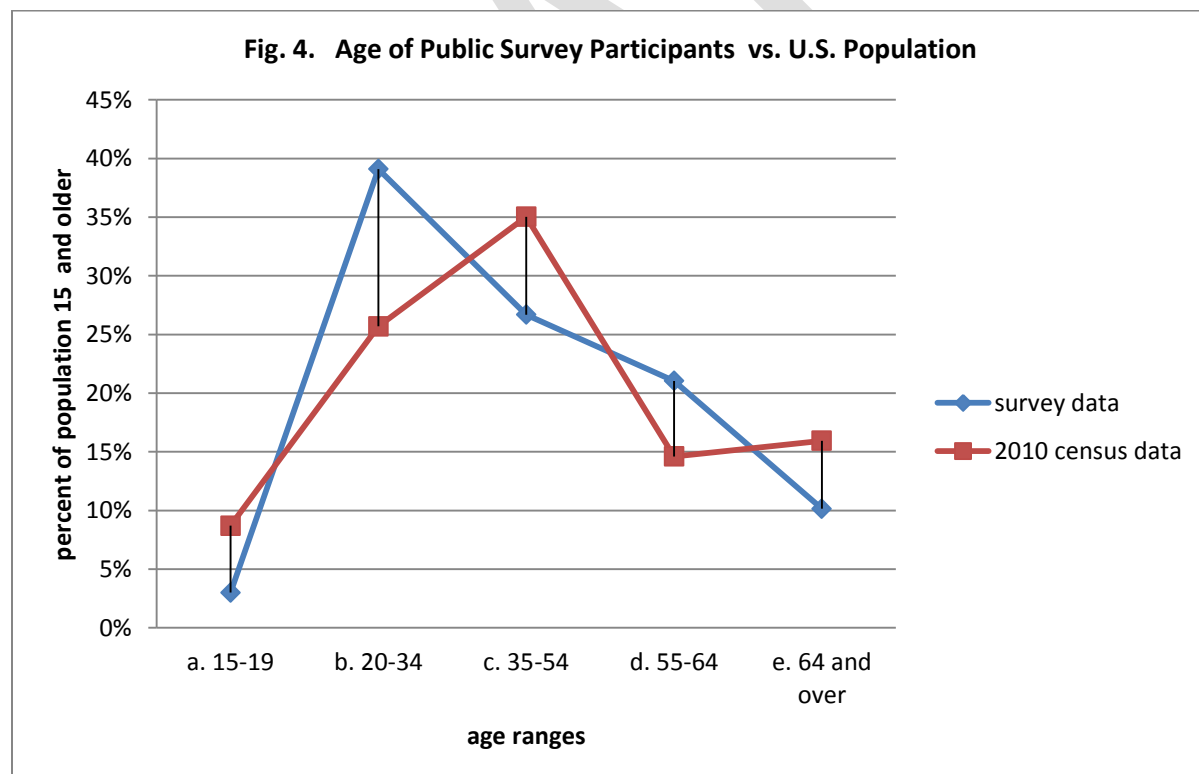
There was a non-linear relationship between farmer incomes and the wages they paid their workers. Average wages were lowest (\$7.88) for middle incomes of %50,000-\$99,000 per year. Wages paid went up for lower and higher income farmers, with farmers earning \$1M-\$5M/year paying \$14.31/hour, and farmers earning \$25,000-\$49,999/year paying \$12/hour. There is no indication as to whether these are hourly wages or piece-wages. The results are illustrated in Figure 3.

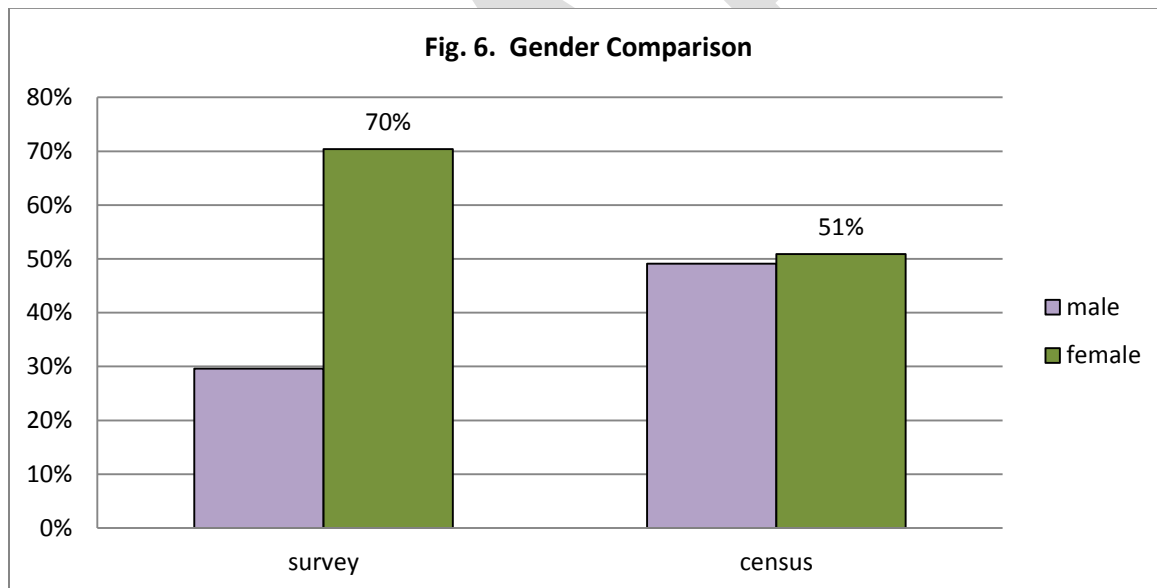
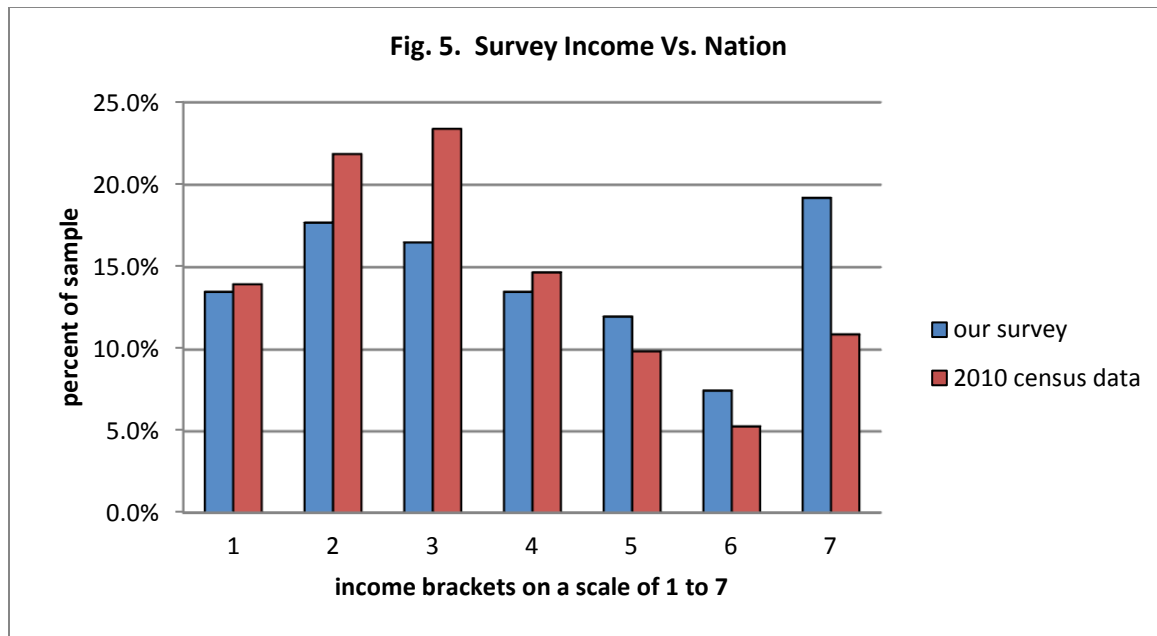


Public Survey

Basic demographic information of survey participants was compared to data from the 2010 National Census. Our surveys were completed in 2011 and 2012, making the Census Data a fairly up-to-date and comprehensive national dataset with which to compare.

Our age distribution was skewed towards a younger public than the nation (Figure 4). Also, incomes of those who answered our survey were skewed towards a wealthier group than the general national population (Figure 5). Our sample's gender distribution was quite different from the US Census results, with an overwhelming majority of respondents being female (Figure 6). Our ethnicity results were similar to that of the nation, with the widest variation being amongst Native Americans and African Americans. This was partially achieved through random participation of respondents during our tabling efforts. However, Latinos were initially heavily underrepresented when compared to the census. In an effort to broaden our participants' representation, we tabled at a local Spanish language church. Respondents from this location helped us meet our ethnicity representation goals, but at the sacrifice of geographic diversity, as well as possibly accurate representation of other demographic factors and randomness of the sample.





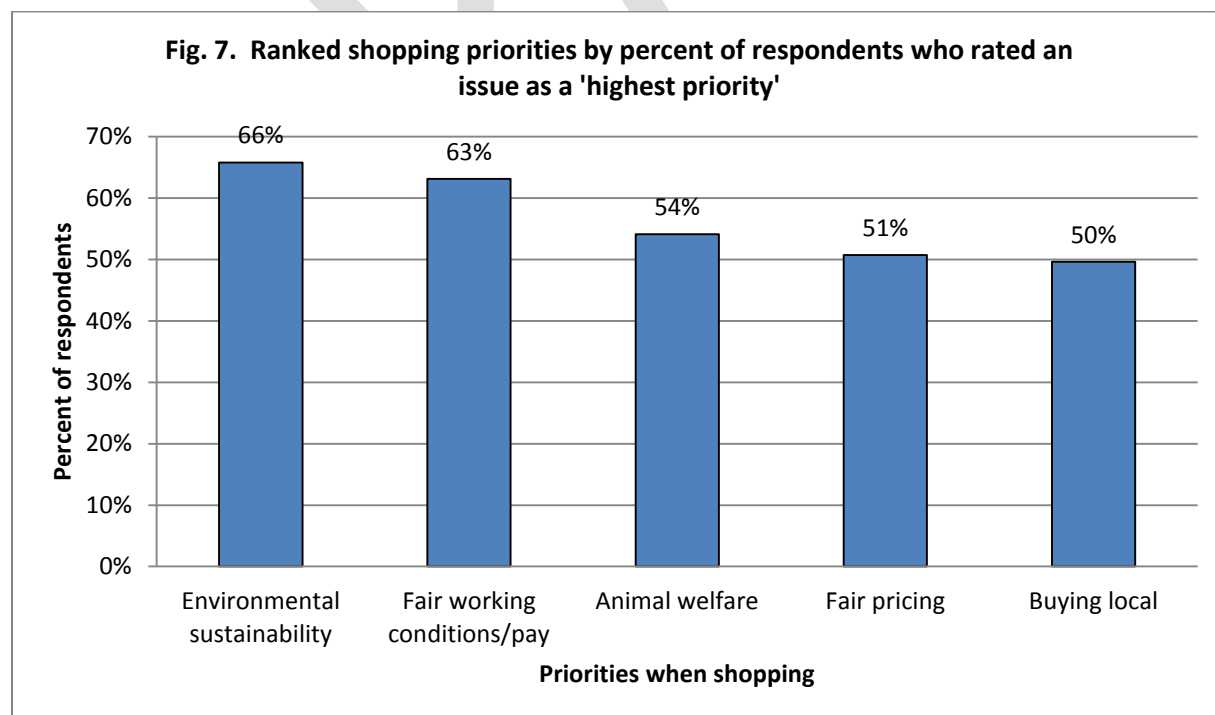
Now that we have summarized the respondents to our farmer/rancher survey and our general public survey, we will attempt to answer three main questions central to our research: What is the public's exposure to issues surrounding fair working conditions for farmworkers and their quality of life? What are the public's priorities about fair working conditions for farmworkers? What is the public's support for fair working conditions farmers and farmworkers? We will also present a model which explores the linear relationship between consumers' exposure to food system issues and their actions in regards to these issues.

What is public's exposure to issues of fair working conditions/farmworker quality of life?

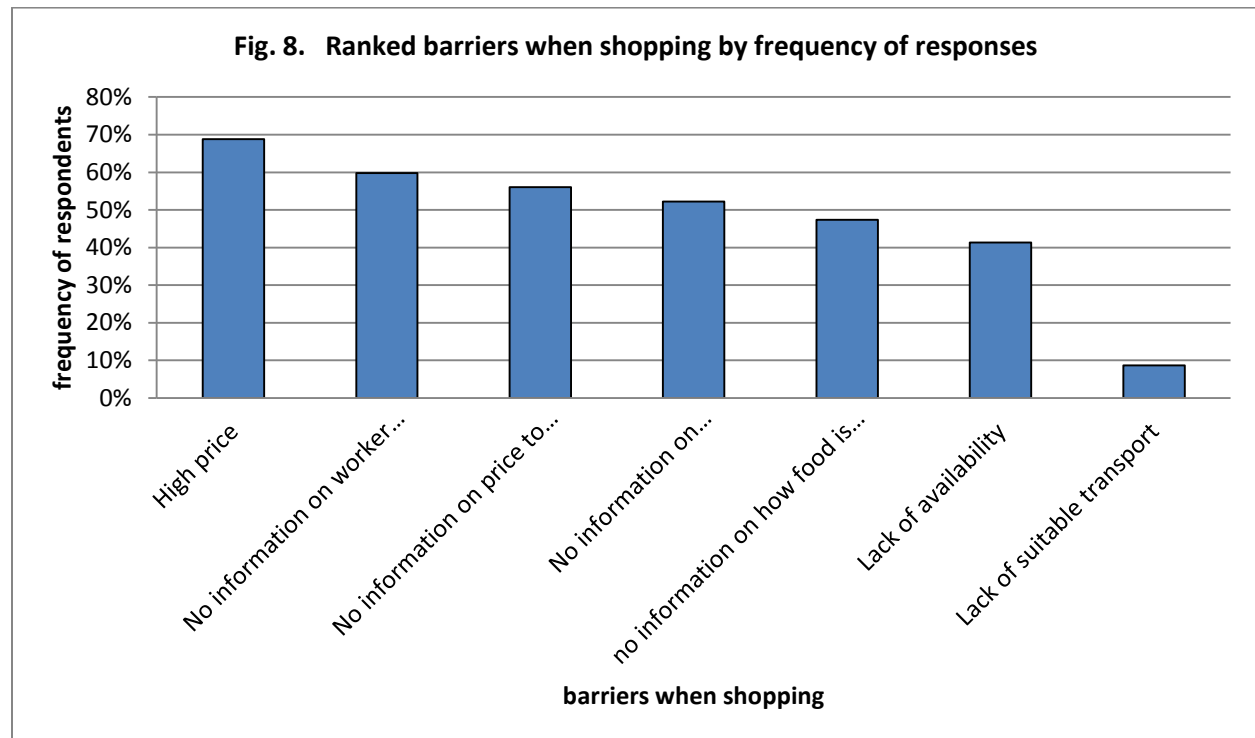
The survey included specific questions about exposure to issues about fair farmworker issues rather than gathering comprehensive data on all possible and likely avenues for acquiring information on farmworker conditions and quality of life. Due to this limitation, questions about exposure to food system issues were composed into a Degree of Education Index (DEI), where respondents are given a point for each issue they claimed to be exposed to. This specific indicator of exposure was then used to cross reference with other variables the survey explored (such as demographics, exposure, purchasing habits, priorities, and willingness to pay).

What is the public's priorities about fair working conditions/farmworker quality of life?

We wanted to know if farmworker quality of life stood out as a high or low priority compared to other issues. To answer this question, the survey asked respondents to rate each of a list of potential priorities on a scale from one to five (five being the highest priority). Then we ranked the frequency with which each priority rank was selected by all participants (Figure 7). Respondents ranked farm worker quality of life as their highest priority, or a five, at a frequency of 63.53%. This issue was marginally behind environmental sustainability, which was ranked as a highest priority (a five) by 65.79% of participants. Interestingly, the priority that was rate 5 the least often was buying local, where participants ranked it as highest priority 49.62% of the time. There may not be sufficient information to determine if one priority was significantly different than others, as all issues received a median rank of five except for buying local, and the mode for all issues was five. Farmworker quality of life was ranked by 65.53% of the respondents as a highest priority, and was 2nd most frequently rated as a highest priority among the issues. However, its mode and median rank was not different from most other issues.



Lack of information about farmworker treatment was cited as a barrier to shopping based on priorities by 59.8% of respondents. This was the 2nd most frequently cited barrier next to high price, which was cited by 68.8% of respondents. The least common barrier was lack of suitable transport, which posed a problem to only 8.6% of respondents; however, this may reflect the more affluent population that completed the survey.



What is the Public's Support for fair farmer/farmworker conditions?

When analyzing this question, we will also look into the possibility of there being a correlation between people choosing to buy organic, choosing to buy fair trade, people's shopping priorities, and how people prioritize fair working conditions. A vast majority of our participants (91%) stated that they buy organic food. However, this number does not indicate the frequency with which they buy organic food, the percentage of their grocery list that is organic, or which organic items they purchased. Organic food buyers did not vary significantly across different demographics, which is to be expected considering their high representation in our sample.

67.7% of our participants say they buy fair trade food. This question has similar limitations to the previous one about organic food, in that we cannot infer how much fair trade food is purchased, or how often. However, participants were allowed to list which items they bought. The overwhelming majority of responses to this were coffee, chocolate, and tea, which are among the most commonly marketed fair trade products (Raynolds, 2000). People who indicated they were White, Native American, and Asian were more likely to say they bought fair trade than not. Those who indicated they were Hispanic

or African American were more likely to say they did not buy fair trade. The Chi-Square significance of these relationships was highest amongst white respondents and Hispanic respondents. Also, there was a significant relationship between buying fair trade and income level, with a seemingly positive correlation.

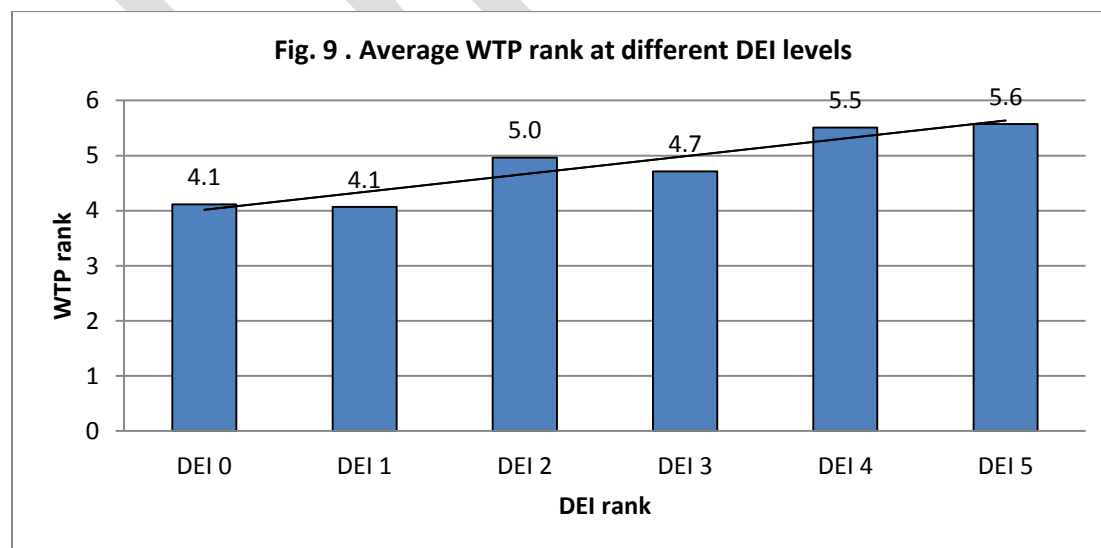
Due to the nature of our questions about shopping priorities, it is difficult to observe a correlation between people's shopping priorities and their decision to buy organic or fair trade food, considering most people bought organic food and most people ranked all issues as high priorities.

The Relationship between Willingness to Pay and Exposure to Food System Issues

When trying to gauge the level of action of our survey participants, possible indicators would be their decision to buy fair trade or organic food, and their decision to pay more for a domestic fair trade label. In our survey, participants were asked what their willingness to pay more for domestic fair trade milk over the price of regular milk would be, as a percentage of the original price. The following table (table 1) shows the willingness to pay rank (WTP rank) as it corresponds with the percentage over the original price.

Table 1. Willingness to Pay for Domestic Fair Trade over Regular Price									
WTP rank	1	2	3	4	5	6	7	8	9
% of price higher	0%	1%	3%	5%	10%	15%	20%	30%	more

We decided to use WTP to measure participants' degree of action in regards to food system issues. The complicated nature of "willingness to pay" questions in social research make it difficult to summarize the actual values indicated by participants. However, the indexed willingness to pay selections on a scale from 1 to 9 will be used to suggest possible correlations between data about our sample and participants' degree of action. It is important to note that we are not making statistical inference about the actual frequencies of selected willingness to pay ranks.



The model fitting information and goodness of fit analysis suggest that at least one of our parameter coefficients is statistically different from zero and that our model fits the data, and our Nagelkerke Pseudo-R square value is .303.

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP 1thru9 = 1]	-4.737	0.593	63.823	1	0	-5.899	-3.575
	[WTP 1thru9 = 2]	-3.366	0.542	38.533	1	0	-4.429	-2.303
	[WTP 1thru9 = 3]	-2.679	0.528	25.747	1	0	-3.714	-1.644
	[WTP 1thru9 = 4]	-1.852	0.515	12.923	1	0	-2.861	-0.842
	[WTP 1thru9 = 5]	-0.602	0.503	1.432	1	0.231	-1.588	0.384
	[WTP 1thru9 = 6]	0.379	0.504	0.565	1	0.452	-0.609	1.367
	[WTP 1thru9 = 7]	1.189	0.516	5.308	1	0.021	0.178	2.201
	[WTP 1thru9 = 8]	3.733	0.754	24.521	1	0.000	2.256	5.211
Location	Income rank1thru7	0.263	0.058	20.699	1	0.000	0.15	0.376
	Age rank1thru5	-0.542	0.112	23.448	1	0.000	-0.761	-0.322
	[buy fairtrade=no]	-1.122	0.271	17.115	1	0.000	-1.654	-0.591
	[buy fairtrade=yes]	0 ^a			0			
	[children<10=na]	-1.267	1.814	0.488	1	0.485	-4.823	2.288
	[children<10=no]	0.327	0.293	1.242	1	0.265	-0.248	0.901
	[children<10=yes]	0 ^a			0			
	[DEI =0]	-0.882	0.433	4.146	1	0.042	-1.731	-0.033
	[DEI =1]	-1.149	0.4	8.245	1	0.004	-1.934	-0.365
	[DEI =2]	-0.581	0.439	1.748	1	0.186	-1.442	0.28
	[DEI =3]	-0.632	0.355	3.164	1	0.075	-1.328	0.064
	[DEI =4]	0.122	0.367	0.11	1	0.740	-0.597	0.841
	[DEI =5]	0 ^a			0			
	[white=no]	-0.563	0.26	4.694	1	0.030	-1.073	-0.054
[white=yes]	0 ^a			0				

Link function: Logit.
a. This parameter is set to zero because it is redundant.

The ordinal regression model shows an unsurprising, positive correlation between income and WTP. Furthermore, people who indicated that they did not buy fair trade food were likely to have a lower willingness to pay for domestic fair trade food than those who said that they did buy fair trade. Interestingly, there was a significant negative relationship between participants' age and their willingness to pay. This would suggest that younger participants were likely to indicate a higher WTP rank than older participants. Also, people who did not indicate they were white were likely to have a lower WTP rank than those who did indicate they were white (Table 2).

The relationship between DEI and WTP was in line with our a priori expectations. The ordinal regression analysis found that people who had a DEI of 0 or 1 had significantly lower WTP ranks than those who had the highest DEI rank of 5, at a 95% confidence level. People who have a DEI rank of 3 specifically were less likely to have a higher WTP than participants with the highest DEI at a 90% confidence level.

The Relationship between Degree of Exposure and Seeing a Film about the Food System.

Initially, we intended to include a dummy variable in the previous model indicating whether or not people had seen a film about food systems. The inclusion of the variable rendered its p-value insignificant, and reduced the significance of the DEI p-values. This suggested a high level of multicollinearity between these two measures. A chi-square test revealed significant reason to believe there exists a relationship between these two variables. When choosing our final model, we opted for the DEI variable instead of the "film" variable because it produced a higher Nagelkerke R square value.

DEI vs. Seen a Film Crosstabulation

		Have you seen a film like 'Food Inc' or similar?			Total
			n	y	
DEI= 0	Count	0	21	13	34
	% within DEI	0.0%	61.8%	38.2%	100.0%
DEI = 1	Count	1	23	19	43
	% within DEI	2.3%	53.5%	44.2%	100.0%
DEI = 2	Count	0	15	13	28
	% within DEI	0.0%	53.6%	46.4%	100.0%
DEI = 3	Count	0	26	40	66
	% within DEI	0.0%	39.4%	60.6%	100.0%
DEI = 4	Count	0	13	40	53
	% within DEI	0.0%	24.5%	75.5%	100.0%
DEI = 5	Count	0	10	32	42
	% within DEI	0.0%	23.8%	76.2%	100.0%
Total	Count	1	108	157	266
	% of Total	.4%	40.6%	59.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.569 ^a	10	.002
Likelihood Ratio	26.509	10	.003
N of Valid Cases	266		

a. 6 cells (33.3%) have expected count less than 5. The minimum expected count is .11.

In order to further explore the relationship between our Degree of Exposure Index and whether or not participants had seen a film about the food system, we ran an ordinal regression where DEI is dependent on the dummy film variable found high significance. We would like to have a more sophisticated model which tries to explain participants' degree of exposure, but we would need a survey that more deeply explores avenues through which people would become exposed to food system issues.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.
Threshold	[DEI = 0]	-2.451	0.223	120.405	1	0.000
	[DEI = 1]	-1.404	0.177	62.697	1	0.000
	[DEI = 2]	-.9	0.164	30.068	1	0.000
	[DEI = 3]	0.194	0.154	1.595	1	0.207
	[DEI = 4]	1.331	0.183	52.865	1	0.000
Location	[seen film=no]	-1.058	0.229	21.423	1	0.000
	[seen film=yes]	0 ^a	.	.	0	.

Public Opinion on What Domestic Fair Trade Should Include

Survey participants were given a list of stipulations on what a Domestic Fair Trade label should allow, and were encouraged to select all stipulations they believed should apply. Across the board, people who believed domestic fair trade should include even one or more of the stipulations listed were more likely to be fair trade buyers. If each 'yes vote' was compiled into an index where all stipulations were given equal value, a chi-square test found a significant relationship between total number of "yes votes" per participant and their likelihood to be fair trade buyers.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.011 ^a	9	.000
Likelihood Ratio	32.061	9	.000
N of Valid Cases	266		

a. 11 cells (55.0%) have expected count less than 5. The minimum expected count is 1.29.

Conclusion

We see positive correlations between people's Degree of Exposure and their willingness to pay for domestic fair trade. Also, people who have seen a film about food systems are more likely to support domestic fair trade through paying higher prices. When trying to understand participants' priorities, it is difficult to observe a correlation between people's shopping priorities and their support for different food system ideals, as most people ranked all issues as high priorities. If we consider buying fair trade as an example of priorities, however, then the positive correlation between a participant choosing to buy fair trade and their monetary support of domestic fair trade is noteworthy.

Our study suggests that there are positive relationships between people's level of exposure to food system issues and their actions in support of improving farmer and farmworker quality of life. Furthermore, an important influence on people's level of education appears to be seeing films about food system issues. Knowledge of this relationship could be a valuable tool for those who wish to influence a community's level of awareness, and potentially their actions, but it is not clear if other ways of gaining exposure to these issues were also important.

While people behaved similarly across basic demographics, minorities of Hispanic and African American ethnicities were least likely to purchase fair trade food. Interestingly, both groups were the least likely to see a film according to our study. However, we cannot draw conclusions based on our racial demographics due to the low number of respondents of these ethnicities. The factors influencing these differences could not be detected in this study, and could be the topic of further research using more extensive surveying efforts.

On the topic of further research, our study may have had farther reaching implications if questions about participants' Organic and Fair Trade purchasing habits were more detailed. Also, a greater diversity of questions attempting to ascertain how people learn about food system issues could help us to understand the factors which affect people's level of education and exposure. While we have looked at factors which effect consumer action in regards to domestic fair trade, further research into the human component of sustainable agriculture is needed. If it is shown that the public and farmers will sufficiently support a domestic fair trade label, great strides could be made for the quality of life of American farmers and farmworkers, and change the landscape of our food system.

Works Cited

- National Agricultural Statistics Service (NASS), USDA, Farm Labor.
http://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Farm_Labor/index.asp
- International Federation of Organic Agricultural Movements. (2009) "Principles of Organic Agriculture."
Bonn, Germany:
http://www.ifoam.org/organic_facts/principles/pdfs/IFOAM_FS_Principles_forWebsite.pdf.
- Organic Trade Association. (2011) "Industry Statistics and Projected Growth." Brattleboro, VT:
http://www.organicnewsroom.com/2011/04/us_organic_industry_valued_at.html
- Raynolds, Laura. "Re-embedding Global Agriculture: The International Organic and Fair Trade Movements." *Agriculture and Human Values* 17.3 (2000): 297-309.
- Shreck, A., C. Getz, G. Feenstra. (2005) "Social sustainability, farm labor, and organic agriculture: Findings from an exploratory analysis." Davis, CA: *Agriculture and Human Values*.
- Strochlic, R., C. Wirth, A. Fernandez Besada, C. Getz. (2008). "Farm Labor Conditions on Organic Farms in California." Davis, CA: California Institute for Rural Studies
- Villarejo, D., D. Lighthall, D. Williams, D. A. Souter, R. Mines, B. Bade, S. Samuels and S.A. McCurdy. (2000). "Suffering in Silence: A Report on the Health of California's Agricultural Workers." Davis, CA: California Institute for Rural Studies.
- Vilsack, T., C. Z. F. Clark. (2010). "Organic Production Survey (2008)." Washington, D.C.: United States Department of Agriculture.
- Social sustainability, farm labor, and organic agriculture: Findings from an exploratory analysis

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