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Research
Brief #11

Farming the College Market: Results of a Consumer Study at UC Santa Cruz

– Jan Perez,¹ Patricia Allen¹

Initiatives to offer more organic, local, or fairly traded foods on the nation's colleges and universities are spreading throughout the country. These efforts, often called “farm-to-college” or “farm-to-university”, aim to utilize institutional purchasing power to support local growers and principles of sustainable food systems, while providing fresh and healthy food to the campus community.

Farm-to-college programs are part of a larger effort to change the food systems in the institutional food service sector, including schools, hospitals, and prisons. Such programs could be a lifeline for small-scale farmers struggling to stay afloat, and would improve the eating habits of millions of Americans. Moreover, if institutional food buyers embrace sustainably produced goods, such as organic or fair-trade products, the environmental and social gains would be significant.

The health, economic, and sustainability potential of farm-to-college programs is intertwined with their ability to meet the needs of the campus communities they serve. Knowing the interests and needs of their customers will enable program managers to better gauge “effective demand” and develop programs consonant with the desires of their customer base. To date, while there are a few studies about farm-to-college programs, there has been no research on the preferences and perspectives of campus consumers.

Since the success of farm-to-college programs involves their ability to meet the needs of campus consumers, we undertook a study of our local campus, the University of California, Santa Cruz, to learn about the perspectives and preferences of campus food consumers. This research brief reports the results of that study and discusses their implications for the development of farm-to-college programs.

METHODS

The study was conducted in collaboration with groups at UC Santa Cruz working to improve the campus food system. These groups include the UC Santa Cruz Food Systems Working Group, UC Santa Cruz Dining Services, the Community Agroecology Network, and the Students for Sustainability (part of the UC Santa Cruz Student Environmental Center). The questionnaire was developed by

Jan Perez, Patricia Allen, and Phil Howard at the UC Santa Cruz Center for Agroecology and Sustainable Food Systems, in consultation with representatives from the groups mentioned above.

An online survey was designed to elicit responses on food-related concerns, interests, and level of support for specific food criteria. In addition, questions were included to assess how food concerns rank compared to other national issues, and preferred methods for people to learn about their food. The full survey is available at www.ucsc.edu/casfs (go to the Publications link, then Research Briefs).

In November 2005, UCSC students, staff and faculty were contacted via email and invited to take the survey online. This email was sent to a random sample of 400 faculty and staff with ‘ucsc.edu’ email addresses, and a random sample, stratified by grade level, of 1,500 students (approximately 10% of the campus population). They were offered a password to get access to the survey (to prevent duplicates) and invited to join a raffle after completing it (33 people were randomly selected to win a \$30 campus bookstore gift certificate).

The survey was available online for people to take until mid January, 2006, and 4 follow-up emails were sent. There were 36 emails that bounced back, and 464 people completed at least a portion of the survey, resulting in a 25% response rate.

RESULTS

Survey respondents

UC Santa Cruz is a mid-sized university (15,000 students) located on the west coast of California. The campus community tends to be relatively liberal on economic and political issues and enjoys a mild climate that makes possible a diverse supply of fresh fruits and vegetables for most months of the year.

Table 1 shows the distribution of respondents in terms of gender (58% female), ethnicity (52% European American), age, and grade level. The table also shows the percentage of students (74%), staff (18%), and faculty (7%) who responded to the survey. These proportions closely approximate those in the campus community: 77% students, 16% staff, and 7% faculty or academic staff.

¹Center for Agroecology & Sustainable Food Systems, UC Santa Cruz

Table 1. Characteristics of UCSC students and staff/faculty responding to survey.*

Sample Characteristics	Count	Percent
Gender (n=415)		
Female	241	58
Male	172	41
Ethnicity (n=416)		
African-American/Black	9	2
Asian-American/Pacific Islander	69	17
European-American/White	241	58
Latino/Hispanic/Chicano	48	12
Native American/American Indian	8	2
Other	17	4
Decline to state	50	12
Age (n=408)		
18 – 21	212	52
22–25	65	16
26 – 30	22	5
31 – 40	32	8
41 –50	40	10
51 and up	37	9
Student/Staff (n=464)		
Student	342	74
Staff/Faculty	122	26
Grade level (n=308)		
Freshman	102	33
Sophomore	43	14
Junior	60	19
Senior	73	24
Graduate	30	10

*A demographic data comparison between the survey sample and campus community is not presented since the data are not currently available campus wide for both students and employees.

Importance of food issues

Although food issues are inevitably bundled with general environmental, economic, and social issues, we wanted to get a sense of their importance relative to “non-food” issues, such as strengthening the nation’s economy and terrorism, which have been ranked as top priorities in national opinion polls (The Pew Research Center 2004). Respondents were asked to rank a set of issues on a Likert scale ranging from 4 (top priority) to 1 (not important).

As shown in table 2, food issues (shown in bold) were comparatively important to survey respondents. Combining categories of top priority and important, only one issue, protecting the environment, ranked higher (90%) than the food issue of access for low-income people (84%). Other important food issues had to do with environment and health—food safety (83%) and pesticides in the food system (77%)—and working conditions (80%). Food issues that were the least important to respondents were developing local food systems (65%) and limiting genetic engineering of foods (53%), which ranked only slightly above protecting the country from terrorism.

Interest in food-system issues

We also wanted to get a sense of the relative level of interest in specific food system issues to the UCSC community.

Table 2. Relative importance of food and non-food issues (n=464).

	Percent who stated:		
	Top priority or important but lower priority	Somewhat or not important	Not sure or missing
Protecting the environment	90.1	9.3	0.6
Improving food access for low-income people	84.0	13.3	2.6
Improving food safety	83.4	14.6	1.9
Addressing unemployment	82.1	15.3	2.5
Improving the job conditions of hired workers on farms and in food processing	80.1	16.8	3.1
Reducing the use of pesticides in the food system	76.9	20.5	2.6
Strengthening the nation's economy	67.3	30.6	2.1
Developing local food systems	65.1	26.3	8.6
Limiting the genetic engineering of foods	53.2	41.4	5.4
Protecting the country from terrorism threats	49.3	46.3	4.3



Working conditions for farm and food industry workers ranked just behind food safety and nutrition in the survey of interest in food system issues.

To gauge this, we asked respondents to rank their level of interest in a series of topics on a scale of 1 (no interest) to 10 (high interest).

The topics in which people are most interested are personal—the safety and nutrition of their food, both of which ranked, on average, greater than 8 (figure 1). Working conditions of workers and environmental impacts of food were of next highest interest, both with an average ranking of 8. Next in line are the wages of workers and the treatment of animals, with an average ranking of 7.71 and 7.65, respectively. This was closely followed by the influence of large corporations (7.2 average ranking). The topic in which people were least interested by a significant margin was the distance food travels from its point of production, at an average ranking of 5.94.

Food label preferences

Inferences about preferred food qualities can be made from the issues in which respondents are most interested. However, a more direct way of assessing the qualities that people would like to see in their campus food is to determine their level of interest in existing labels that promote different food qualities. We asked respondents to rate (on a 7-point scale) their level of interest in purchasing food with the following labels: fair trade, certified organic, locally produced, water quality protection, humane treatment of animals, U.S. grown, and union.

The percent of respondents with a “strong interest” in the label (those who chose the top 2 interest categories out of 7), was high, above 50%, for organic, humane treatment, water quality, fair trade, and locally grown (table 3). Although the percent with strong interests varies (from 64% for organic to 56% for local), the differences between the levels of interest in these five labels are not statistically significant. However, interest in U.S. grown and a union label was much lower, and was statistically different than interest in the top five labels.

It is perplexing that interest in a union label is significantly lower than in a Fair Trade label, since both deal with providing fair wages and fair working conditions or rules. The negative publicity towards unions in an age where free market principles dominate has likely played a role in these results. In addition,

Table 3. Strong interest in existing food labels (n=416).

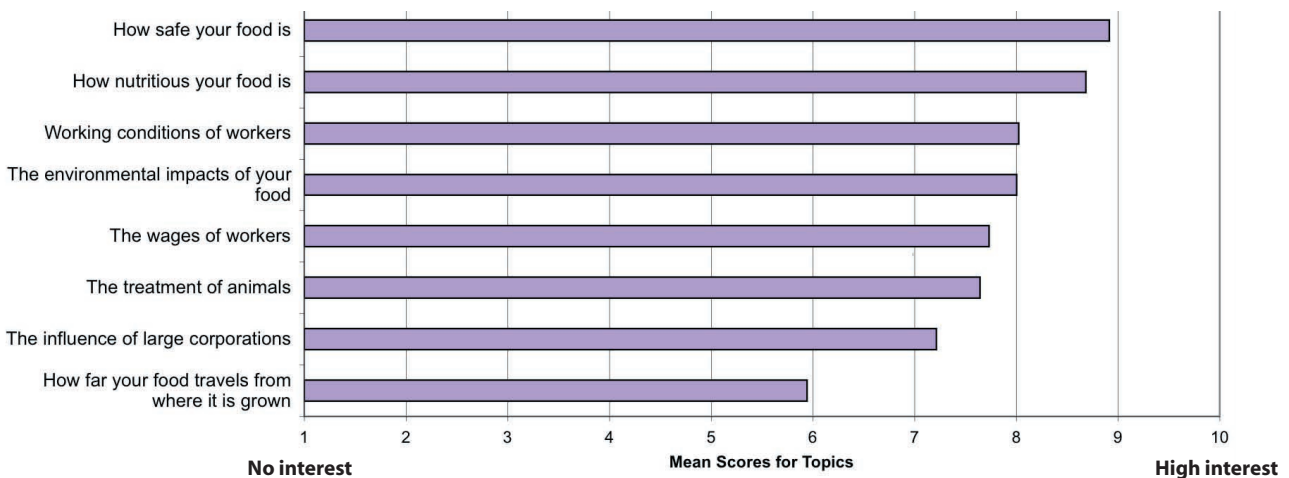
Label	Percent with strong interest
Certified organic	64.4
Humane treatment	62.3
Farmers are protecting water quality	61.1
Fair trade	58.7
Locally produced	55.8
U.S. grown	40.4
Union label	37.7

tion, people may have been personally affected by union labor actions such as teacher and bus driver strikes and may have had conflicted reactions as to the merits of such activities. The Fair Trade label, on the other hand, is a relatively new initiative. This newness allows a greater focus on principles and less on the difficult issues that develop when ideals are put into practice. Understanding more about the differential support for unions and fair trade would be worthwhile to explore in future research.

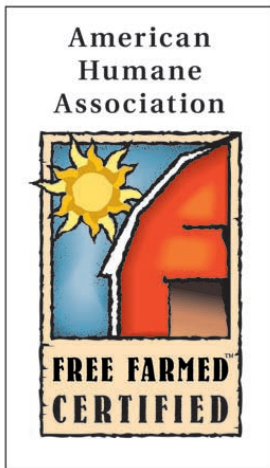
Labeled food purchasing patterns

What people say they prefer and what they actually do may, of course, be quite different. In order to get a sense of the extent to which people actually exercise the label preferences they indicated in the marketplace, we asked about their purchase patterns of foods

Figure 1. Level of interest in food system-related topics.



A food label that guarantees humane treatment of animals was one of the most popular choices among respondents, ranking with organic and water quality protection.



with these labels.¹ We asked specifically about fair trade, organic, and local, first defining the terms (see survey at www.ucsc.edu/casfs for definitions). Respondents were asked to check one of the following options regarding their purchasing habits: never, at least once a year, at least monthly, at least weekly, and don't know.

Respondents claimed to purchase these products quite often (table 4). At least 50% of the respondents reported purchasing products with one of these labels at least monthly or more often. Organic is the most frequently purchased item, with 42% buying such products at least weekly, and 68% at least monthly. Local products were the next most frequently purchased, with 63% purchasing them at least monthly. Almost 25% of people purchase fair trade at least weekly, and 52% at least monthly.

¹Of course, even findings about behaviors can be overstated, since people may feel the need to temper their responses in order to appear more liberal or generous.

A large number of respondents stated that they did not know whether they have purchased products with these labels. Almost a third of the respondents didn't know whether they had purchased food that was fair trade and 27% didn't know whether they had purchased local foods. And, even though the organic label is fairly well established, 16% of the people said they didn't know whether they had purchased organic food.

This information implies that either people don't know enough about the labels, or that they just don't look for them when they purchase their food. Considering that organic foods are fairly well known, it is likely safe to assume that the high numbers of those who didn't know whether they had purchased fair trade may be partially due to lack of information about the label. Thus, it would be useful to have more education about the Fair Trade label. The large percentage of those who didn't know whether they had purchased local is likely due to the fact that there isn't a standard label for such products.

Willingness to pay for social justice

The U.S. food system is embedded with a number of social justice issues. For example, one of the factors that makes America's relatively "cheap" food supply possible is low labor costs; the wages of workers in the food industry are often at poverty or below-poverty levels. To get at the criterion of social justice, we asked if people would be willing to pay more for their food if it meant better conditions for workers, and a living wage.

In order to gauge this interest, survey respondents were asked whether they would be willing to pay more for a single product, strawberries. We chose strawberries because there had been a United Farm Workers campaign in the region to inform people about how much paying just five cents more for a pint of strawberries would do to improve wages and working conditions for strawberry farm workers.

We asked survey respondents how much more they would be willing to pay for a pint of strawberries that guarantees a living wage and safe working conditions for farm workers. Survey respondents were randomly assigned 1 of 4 questions, asking if they would be willing to pay 5 cents, 25 cents, 50 cents or \$1.50 more for strawberries that otherwise would cost \$1.50 (each survey had only one of these questions).

Results indicate that nearly all respondents would be willing to pay at least 5 cents more (a 3% increase over the base price) and most people state they would pay significantly more than that (table 5); 85% are willing to pay 25 cents more (a 17% increase), 74% are willing to pay 50 cents more (33% increase), and close to 50% claimed willingness to pay twice as much for a pint of strawberries.

We posed a second "willingness to pay" question to meal-plan holders. We asked, "Would you be willing to pay more for your meal plan if the food



Survey respondents indicated that they would be willing to pay more for strawberries produced in a socially just manner, such as organic berries served at a UCSC Dining event.

Table 4. Purchase frequency of Fair Trade, Organic, or Local food.

Percent of people who purchase these foods:	Fair Trade (n=429)	Organic (n=430)	Local (n=430)
At least weekly	23.5	42.3	37.4
At least monthly	28.2	25.6	25.1
At least once a year	6.5	11.4	6.3
Never	4.9	4.7	3.7
I don't know	31.7	16.0	27.4
I don't buy chocolate, coffee, tea, or other imported fruits	5.1		

Table 5. Willingness to pay more for "socially just" strawberries.

Would you pay more?	Percent who are willing to pay:				Total
	5 cents more (n=85)	25 cents more (n=130)	50 cents more (n=125)	\$1.50 more (n=79)	
Yes	92.9	84.6	73.6	49.4	76.4
No	2.4	7.7	8.8	25.3	10.3
Unsure	4.7	7.7	17.6	25.3	13.4
Total	100	100	100	100	100

Table 6. Willingness to pay more for a meal plan for food produced in a "socially just" manner.

	Percent who said :	
	I'm willing to pay more (n=102)	I think my guardians are willing to pay more (n=130)
Yes	32.5	30.0
No	26.5	24.6
Unsure	41.2	45.4
Total	100	100

had been produced in a socially just manner—for example, where workers have safe working conditions and receive a living wage (allowing workers to meet basic needs like housing, food, clothing, and transportation)² A third of meal-plan holders were willing to pay more for socially just food, a quarter were not, and the remainder were unsure (table 6).

Why are there so few people willing to pay more in the dining commons than for a pint of strawberries? First, the lack of interest shown here is likely at least partially an artifact of the way the question was asked. Unlike the strawberry question, the meal plan holders were not asked a specific amount more that they might be willing to pay—which likely led to the large “unsure” numbers. We were not able to give a more specific amount because it is not clear how much a meal costs (meal plans and living quarters are paid for as one unit).

² Since some students pay for all or part of their meal plans, and others don't, we asked this questions in two different ways. For those students who contributed financially to their meal plan (with personal funds, loans, grants, etc.), we asked them whether they'd be willing to pay more. If a students' parents or guardians paid part or all of the meal plan, the student was asked whether they thought these people would be willing to pay more.

Second, meal plan holders may just be less likely to pay more in general. From comparing how meal plan holders and all others answered the strawberry question, meal plan holders were somewhat less likely to pay more for the strawberries than the others (89% of meal plan holders would pay 5 cents more, compared to 96% of all the others).

As noted, our survey results show that one-third of meal plan holders indicated a willingness to pay more

for a meal plan for food produced in a socially just manner, and about one-quarter were opposed to such a cost increase. Further research, with more specific scenarios, would be needed to get a better idea of the number of people that might really be willing to pay more.

When considering these results, it is important to keep in mind that people don't always do what they say they will—that they are more likely to respond positively on a survey than they may in practice. People often take many factors into account when making purchases, not just one. However, even given a likely inflated positive response, there appears to be significant support for paying more for socially just food.

Learning methods preferences

We asked respondents to indicate their preferences for how they would like to learn about the food system. Ten options were listed on the survey and respondents were asked to check four of them (without ranking them). As is shown in table 7, respondents' preferred media for learning about their food were product labels (62%) and information available where they purchase or eat their food (52%). Print media—e.g., newspapers, magazines, articles, and books—and web pages were the next most preferred at 48%

Table 7. Percent of people who want to obtain more information about their food through the following methods (n=434).

Method	Percent
Product labels	61.4
Brochure, table tent, or display located where you purchase or eat your food	52.2
Newspapers or magazine articles/books	48.1
Web pages/the internet	47.4
Tours of farms and/or processing plants	24.4
Television program/vidiotape/DVD	23.7
Talking to seller/farmer	20.7
Classroom lecturer/guest speaker	20.5
Campus event or presentation	17.5
Radio	13.4
Study group	3.4
Other	2.2

and 47%, respectively. Other methods—tours, audiovisual media, talking to farmer/seller, and lectures—were preferred by less than 25% of respondents. Study groups garnered the least interest at 3%.

Providing food system education in the dining halls, campus restaurants, and at coffee carts will likely be the most appreciated and most effective method for sharing information with a broad audience.

CONCLUSION

This study shows that food issues are important to a campus community, particularly regarding concerns for the environment and for people. Survey respondents showed high levels of interest in purchasing food produced in an environmentally sound and socially just manner. Key points from this study include –

- There is significant interest in campus food that is nutritious, safe, supports workers, and is environmentally sound; interest in local food and GE-free food is lower.
- People are interested in sustainably produced food and a majority of people already purchase food with labels based on these criteria.
- Many people are willing to pay more (if necessary) for food that meets social justice criteria.
- A campus community is likely to be receptive to education and discussion about food-system issues.
- Since nutrition and food safety were of great importance to people, framing discussions of food-system issues in terms of health will meet people's needs as well as capture their attention for education on other food-system issues, such as working conditions and environment.

It would not be appropriate to extrapolate too much from a study of one campus; results from our 2007 national student survey will provide more comprehensive data.

In the meantime, the results of the UC Santa Cruz study support the idea that colleges and universities are excellent choices for developing farm-to-institution programs and for popular education on food-system issues.

Acknowledgments

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REFERENCE

The Pew Research Center. 1994. Additional findings and analyses: Economy and anti-terrorism top public's policy agenda. 15 January. <http://people-press.org/reports/display/p.php3?PageID=778>. Accessed on 26 January 2005.

To access the full version of the online survey used in this study, go to www.ucsc.edu/casfs and click on Research Briefs under the Publications link.

The Central Coast Research Project

Social issues research on consumer interest in the food system is part of the CASFS Central Coast Research Project, funded in part by the US Department of Agriculture. The project explores ways to improve the sustainability of the food and agricultural system on California's Central Coast. Included in the project is research on water quality and ways of decreasing nonpoint source pollution from the region's farms.

Other Center Research Briefs –

- Brief #1. Community Supported Agriculture on the Central Coast: The CSA Member Experience
- Brief #2. Land Use and Water Quality on California's Central Coast: Nutrient Levels in Coastal Waterways
- Brief #3. Alternative Food Initiatives in California: Local Efforts Address Systemic Issues
- Brief #4. Community Supported Agriculture on the Central Coast: The CSA Grower Experience
- Brief #5. What Do People Want To Know About Their Food? Measuring Central Coast Consumers' Interest in Food Systems Issues
- Brief #6. Participatory Action Research and Support for Community Development and Conservation: Examples from Shade Coffee Landscapes in Nicaragua and El Salvador
- Brief #7. Central Coast Consumers' Interest in Food Systems Issues: Demographic and Behavioral Associations
- Brief #8. Land Use and Phosphorus Levels in the Elkhorn Slough and Pajaro River Watersheds
- Brief #9. Meeting Farm and Food Security Needs through CSA and Farmers' Markets in California
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