

# **College Food Systems Comparison**

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# Research Proposal

Food is a personal aspect of peoples' lives. It fuels our bodies and minds and satisfies our taste buds. Cultures around the world have strong ties to their land and the food that it provides them. Agriculture and the manipulation of soils is the most intimate way mankind interacts with the natural world. The process of working the land provides us with nutrients, and traditionally was a large part of human culture. Large corporations have reduced Americas' meals to profits and sales and taken the traditions out of farming, cooking and eating. Industrial agriculture has centralized and poisoned America's food and stripped communities all over the country of their culture and identity. A variety of consequences have emerged including; increase of overweight individuals, loss of family farms, overall degradation of farmland including soil and water quality and massive unnecessary energy expenditure in producing and shipping products all over the world.

Today politicians and policy makers devoted to working towards a more sustainable society will have to implement serious alterations to our current industrial agriculture system. Aside from degrading American's mental and physical health it is degrading our land and water at an alarming rate. Massive amounts of unnecessary pesticides, fossil fuels and water go into producing our food, killing insects and birds and degrading habitats for other wildlife. The wasteful, and dangerous practices of the agriculture industry have not gone unnoticed and actions have been in communities all over America.

There have been a variety of responses by citizens to address this take over of their food and culture. CSA (Community Supported Agriculture) programs and farmers markets have been on the rise for the last thirty years. CSAs are programs where people can sign up with a farmer and receive a box of food weekly for a set price. These programs allow consumers and farmers to connect directly. Smaller farms can establish a reliable network of businesses in their own community and consumers can speak directly to the producers of their food. The environmental benefits from these programs are also outstanding; including reducing packaging and energy use. CSAs and farmers markets reestablish the culture and community that is inherently tied to food and humans. Consumers have the opportunity to learn about how and where there food is grown, how to prepare dishes and who grew their food. This community and culture capital created by CSAs and farmers markets is spreading and students have contributed to it.

College campuses have not been excluded from this trend and there are numerous examples of successfully operated student run food cooperatives around the nation. College is the time where students are not only earning a degree, but also learning how they want to live their lives. Students are aware of the importance of their daily decisions to their personal and community health and they understand the responsibility and consequences of being a consumer. The Cal Poly Campus contains numerous students with enthusiasm for healthy, local, and organic foods. There is a market for this food on campus and with support from the Cal Poly Corporation, faculty and administration the school could be apart of this exciting sustainable agriculture

movement. I hope through my research to better understand the current barriers of providing sustainable agriculture products on campus.

## **Annotated Bibliography**

**Brehm, Joan M.; Eisenhauer, Brian W. "Motivations for participating in community supported agriculture and their relationship with community attachment and social capital". *Southern Rural Sociology : SRS*, 2008, v. 23, no. 1, p. 94-115. 23. 1 EBSCO Host.**

A detailed survey was done on the members of CSAs in Central Illinois and New Hampshire. The researchers focused on the motivations for membership and the opinions of these members of the benefits of CSAs on their community. A desire to feel attached to the community and contribute to supporting the community members were found to be significant. This research will especially contribute to my understanding of why community supported agriculture systems are successful in creating social capital.

**Falk, C.L.; Cramer, C.S.; Pao, P. "Teaching diversified organic crop production using the community supported agriculture farming system model." *Journal of Natural Resources and Life Sciences Education*, 2005, v. 34, p. 8-12. 34 EBSCO Host.**

The authors of this paper are professors at the University of New Mexico. This paper evaluates the implementation and progress of New Mexico State University's CSA program. The fact that the article covers the birth, development and future goals of the program is extremely valuable. It provides details on how the program fits into classes and the opportunities for students to participate on the farm. Conflicts between maintaining the CSA and meeting class goals are also covered.

**Friedmann, Harriet. "Scaling up: Bringing public institutions and food service corporations into the project for a local, sustainable food system in Ontario". *Agriculture and Human Values*, 2007 Sept., v. 24, no. 3, p. 389-398. 24 3. Dordrecht: Springer Netherlands**

A non-profit certifying organization called Local Flavour Plus assisted the University of Toronto with increasing local and sustainable food products in their catered events. The paper covers the methods Local Flavour Plus used and the difficulties encountered while implementing the changes. Important skills and resources are recommended in the paper for those working on social movements and institutional changes. This paper is useful because it is focused on a campus setting and provides details on the different approaches that can be used for change.

**Gliessman, Stephen R. "Agroecology: the ecology of sustainable food systems". *University of California Santa Cruz. Taylor & Francis Group* (2007).**

This is a textbook used by many introduction classes to the subject of Agroecology. It explains the fundamentals of plant functions and illustrates the system-level interactions of agroecosystems. This book will provide me with information about the science behind

sustainable agriculture and how the practices differ from conventional industrial agriculture systems. The text provides a tentative plan on how to transition our current agriculture system to a more sustainable agroecosystem.

**Hardesty, Shermain D.; Leff, Penny. “Determining marketing costs and returns in alternative marketing channels”. *Renewable Agriculture and Food Systems*, 2010. Mar., v. 25, issue 1, p. 24-34. 25 1 EBSCO Host.**

The authors conducted case studies of three organic farming operations and compared how profitable it was to sell in alternative markets as opposed to wholesale. Farmer’s Markets and CSAs are considered to be direct marketing channels and were found to potentially be more profitable for smaller farms. These channels allowed them access to more markets, reduced packaging costs and allowed them to sell directly to the customers. Understanding the finances of food sales and costs farmers must consider is important and necessary for my research

**Holthaus, Gary. “From the farm to the table; What all Americans need to know about agriculture”. *University Press of Kentucky* 2006.**

Gary Holthaus’s book provides a comprehensive look at farming in the United States. He covers all related topics of farming including; history, economics, global issues, and social and cultural resources. His interviews with farmers demonstrates the variety of people and techniques that make up the industry. Reading this provides me with a holistic view of the US agriculture system and demonstrates the complexity of the issues involved. The chapters dedicated to policy history will be especially useful in understanding how and why US agriculture is the way it is today.

**Lea, E.; Worsley, A.; Ward, M.; Phillips, J. “Farmers' and consumers' beliefs about community-supported agriculture in Australia: a qualitative study.” *Ecology of Food and Nutrition*, 2006 Mar-Apr, v. 45, no. 2, p. 61-86. 45 2. EBSCO Host**

Analysis of both consumers and farmers was done, but the information regarding the farmers will be the most useful. Twelve farmers were interviewed and asked what they saw as the costs and benefits of community supported agriculture. The farmers saw the risk sharing as a negative aspect, but recognized the potential increase in revenues.

Looking at other country’s assessment of CSAs in their communities gives me a broader understanding of how the programs vary with location.

**Howard, Philip H.; Allen, Patricia. “Beyond organic and fair trade? An analysis of ecolabel preferences in the United States”. *Rural Sociology*, 2010 June, v. 75, no. 2, p. 244-269. 75 2**

These researchers investigated consumer preferences by asking what type of labeling they would prefer aside from fair trade and organic. The options consisted of humane, local, living wage, small-scale, and U.S. grown. Local was the most popular choice with humane coming in second. The results from this study show an increase in consumer consciousness of their purchases. This also demonstrates the direction that food systems should take not only for environmental reasons, but because of consumer demand as well.

**Summer, Jennier, Mair, Heather, Nelson, Erin. “Putting the Culture Back in Agriculture; civic engagement, community and the celebration of local foods”. *International Journal of Agricultural Sustainability*. 8.1, 54-61. June 2010.**

**ProQuest Direct.** □

The authors analyze a community supported agriculture program in Ontario, Canada. Their investigation revolves around how the CSA affects the community, emphasizing on the positive consequences such as increased social gatherings and healthier citizens. CSAs role in sustainable food systems is also emphasized. This article will be extremely valuable for understanding the social benefits of reconnecting people with local foods.

**Sundkvist, A.; Jansson, A.M.; Milestad, R. “On the importance of tightening feedback loops for sustainable development of food systems.” *Food policy*, 2005 Apr., v. 30, no. 2, p. 224-239. 30 2**

This paper focuses on feedback loops between ecosystems, actors in the food production chain and consumers. It investigates the variables that act against tightened feedback loops in food systems such as crop intensification, specialization and distancing. Analysis of individual factors in the current food system increases my understanding of how it functions and how it can be improved. I found the researchers’ emphasis on the importance of education and communication with producers and consumers in the food system to be very interesting. The unique look at food systems using feedback loops provides me with another approach for analysing college food systems.

## Outline

Research Question: Why is sustainable agriculture supported more on some college campuses more than others?

Thesis: Environmental responsibility is a part of Cal Poly’s mission statement and does appear in some curricular offerings however the food systems supported by the institution does not reflect this ideal. Administrative support, student demand, and corporate control are determinants of the food options on college campuses.

1. Cal Poly Corporation supports sustainable agriculture at a minimal level, and has been resistant towards students’ demand for improvement.
  - A. Current food options on campus.
    - Amount of budget that supports organic and local food options
    - Contract with Coca Cola Corporation and the amount of control it has on food options.
    - Assess student demand with a survey on the portal.
  - B. University support for food systems.
    - Industrial agriculture influences in curriculum
    - Campus support for Organic Farm vs. support for conventional agriculture (dairy, and meat processing units)
2. College campuses across the United States show support for sustainable food systems

in their dining halls and curriculum.

A. Private schools

- Interviews with dining hall heads and students on campuses at: Brown, Harvard, Yale and Dickinson
- Discuss the influence of corporations on food options at these schools
- Assess student demand through interviews

B. Public schools

- Interviews with dining hall heads and students at University of Washington, UCSD, Berkeley, and Iowa State.
- Discuss influence of corporations on food options at these schools

3. Conclusion: Providing food to thousands of people on a daily basis is approached differently on college campuses, some schools making sustainable agriculture products a priority.

A. Areas where Cal Poly could improve

B. Schools that Cal Poly dining could look to as examples

## Document Text

Research Question: Why is sustainable agriculture supported more on University of Washington's campus than on California Polytechnic State University?

Thesis: Environmental responsibility is a part of Cal Poly's mission statement and is infused in curriculum, however the food options on campus reflect this ideal to a minimal degree unlike other universities such as University of Washington. Administrative willingness and support and student demand are determinants of the food options on college campuses.

## Introduction

This paper started with my love for the environment, food and people. I came to Cal Poly hopeful regarding the school's dedication to sustainability, after all the class catalog for my year had the word spread across the cover, with farmers lovingly working the earth. Moving through, my education, however, I found myself increasingly disillusioned by the schools actions versus their rhetoric. Through some of my classes and personal readings I have learned a great deal about agriculture and its impacts on our lives and our environment. I have also learned that not all crops and livestock are the same, regarding degrees of impacts on the earth. How products are grown, raised and where they come from are important factors to consider as a conscious consumer that cares about their personal health and the environment. In our globalized world, Americans have become accustomed to having everything they want instantaneously, food options being a significant aspect of this. As a firm believer in the power of personal choice I strive to tread lightly on the earth with my food purchases, always

looking to buy organic and local when possible. When looking for food on Cal Poly's campus, I have found it exceptionally difficult, to stay true to my food values. Local organic products are a rare find, and organic dairy products and grass fed beef are nonexistent. These facts inspired my research on this topic, seeking answers for why or why not sustainable agriculture products are on college campuses.

The College Sustainability Report Card was the starting point for my investigation. The website [greenreportcard.org](http://greenreportcard.org) used a survey to assess more than 300 school's efforts toward sustainability on campus. Cal Poly earned a B in the food and recycling section of the report and the University of Washington was given an A. I decided to compare and contrast the two school's food systems, to hopefully further understand why some institutions are more supportive of sustainable agriculture than others. The reasons I theorized were: level of student demand, administrative support, and corporate influences in the schools. What I found was not as simple as breaking up three distinct reasons for the differences in the dining programs. Instead there were numerous potential influences that each requires a twenty five page paper to fully understand how they impact the food options. This paper is devoted to helping the reader understand the workings of college food systems, the variety that exists, the challenges, and realities of supplying 20,000 plus people with good, affordable and perhaps sustainable food.

## Sustainable Agriculture

The starting place for this topic is defining sustainable agriculture. We must first break apart the two words and fully understand what sustainable agriculture means. From a standard dictionary *sustainable* means, to support, undergo, and bear or to keep from giving way. With this in mind the next question is what are we supporting, undergoing, bearing, or keeping from giving way? The answer to these questions depends on the viewpoint; some people would say sustainable agriculture's main purpose is to continue it's economic viability where as others would place more emphasis on sustaining the Earth's ability to provide food. The department of sustainable agriculture at the University of California Davis defines sustainable agriculture as a practice that integrates three main goals: environmental health, economic profitability, and social and economic equity (SAREP). This definition was the same at the other leading sustainable agriculture research institutions such as Washington State University and the National Sustainable Agriculture Information Service. Breaking down each part of the definition provides a deeper understanding for how farmers attempt to achieve this and why consumers should demand and support certain practices.

Environmental health can be achieved and maintained with specific methods and organic farming incorporates many of these techniques. The vast variety of factors on farms, such as the location, water source, and crops grown, makes it impossible to make sweeping statements regarding what practices will be sustainable on specific sites. It is possible to observe and document the benefits from organic agriculture, and researchers at numerous institutions have done just that. The National Sustainable Agriculture Information Service states that "rather than relying on synthetic fertilizers and pesticides,

organic farms protect the environment by building soil organic matter and mimicking natural systems” (AATRA). Research studies have demonstrated that compared to conventional farms, organically farmed soils tend to have: less nitrogen leaching (McIsaac and Cooke, 2000; Solberg, 1995), better nutrient holding ability (Wander et al., 1994), more efficient biological nutrient cycling (Drinkwater et al., 1998; Wander et al., 1994), less runoff and erosion (Stolze et al., 2000). On top of all these benefits, a new report (Hepperly 2004) from the Rodale Institute in Pennsylvania discusses findings from their 23-year long Farming Systems Trial demonstrating that organic farming systems can tie up atmospheric carbon dioxide, the primary greenhouse gas linked to global climate change (Hepperly 2004). They cite two primary differences between organic and conventional cropping systems that lead to this reduction: (1) lower use of fossil fuel energy and (2) greater sequestration of atmospheric carbon in the soil. In contrast, industrial conventional agriculture is founded on the ideas that a farm is a factory with "inputs" (such as pesticides, feed, fertilizer, and fuel) and "outputs" (corn, chickens, and so forth). The goal of this industry is to increase yield (such as bushels per acre) and decrease costs of production, usually by exploiting economies of scale. The benefits of this model include low food prices for American consumers, cheap feed for animal factory farms, a potential energy source to replace foreign oil, and substantial exports to foreign markets. Characteristics of this industry are: monoculture, few crop varieties, reliance on chemical and other "inputs", and separation of animal and plant agriculture. These practices may provide America with cheap food, but at high costs to our environment and health. The price of these factory's products do not reflect their true costs, such as polluted waterways and harmful pesticide health side effects. If they did, then organic sustainable agriculture systems would come out to be not only better for us and the Earth, but more profitable. The estimated environmental and health care costs of the recommended use of pesticides in the U.S. are about \$10 billion per year (Pimentel 2005) and the industries using them are not held accountable to this cost. Atrazine, one of the most widely used herbicides on corn, is also one of the most commonly found pesticides in streams and groundwater (USGS 2001). In a comparison between organic foods with conventional agriculture, organically grown foods consistently had about one-third of the pesticide residues (Baker et al. 2002).

The economic profitability and viability of organic and local agriculture can be seen at multiple levels. Organic farming has become one of the fastest growing segments of U.S. agriculture (US Department of Agriculture). At the retail level, organic produce and milk, the two top organic food sales categories, receive significant price premiums over conventionally grown products. Consumers prefer organically produced food because of their concerns regarding health, the environment, and animal welfare, and are willing to pay the price premiums established in the marketplace. Government policies have made efforts to encourage this support, recognizing organic foods community benefits and profitability. A national certification standard has been established that assures consumers of consistent product quality and streamlines interstate commerce in organically grown products. Also in 2008, Congress included new provisions in the Food, Conservation, and Energy Act (2008 Farm Act) that expand support for the organic sector. Local food programs such as community supported agriculture (CSA), farmer's markets and National Farm to School have all been on the rise. Across the United States there are 12,549 farms that market in some type of CSA and farmers markets have risen

6.8 percent from 2009, reaching a total of 4,685 (United States Department of Agriculture). These types of programs keep money in your region, foster strong communities and can improve the landscape and natural environment. The Maine Organic Farmers and Gardener's Association published a study that demonstrates what would happen if consumers shifted 1% of their purchasing power to buy locally grown products: farmers would see a gain of 5% in their income. Even better, buying direct from a farmer sends 90% of those food dollars back to the farm. Increasing farm income means more money can be spent locally by the farmer to run their business and home, helping keep the local economy alive (Sustainable Connections).

Social and economic equity is a part of every sustainable agriculture definition, but an elaboration of what that means and how it strives towards this and achieves it is essential. "The values of the organic movement are based on observation and common sense: treat livestock well, use resources sparingly, use the least harmful method, and nature is inherently valuable. Food security depends upon personal relationships of integrity and trust among farmers, farm workers, suppliers, consumers and others up and down the agricultural supply chain and integrity and trust have been fundamental to organic agriculture's success" (WSU). This expansion on organic agriculture addresses the importance of integrity and trust, both of which are easier to maintain at the local level. Despite the obvious connections between organic and local food movements, local eating does focus more on the social and economic equity of sustainable agriculture. This is due to the fact that industrial agriculture has gone organic and uses the same distribution model that ships food all over the world, consuming almost equal amounts fossil fuel and not contributing to the local community. Consumers can reduce their carbon footprint by purchasing local foods and establish connections with their farmers.

## **University of Washington's Food System**

With a deeper understanding for what sustainable agriculture is and why it is important for our futures we can now examine both California Polytechnic State University's and University of Washington's food systems. I chose University of Washington to compare to Cal Poly's because it was a large public university that seemed on the surface, to have more obstacles, but was providing more sustainable food. These obstacles are; double the student population, located in a large city and located in a less fertile place than California's Central Coast. Comparing the two school's survey results from greenreportcard.org emphasizes the contrast in the types of food offered on the campuses.

The following pages are the filled out surveys from the two schools, completed by the dining executives. I pulled these surveys from the Green Report Card website and the only aspects changed were format related.

# University of Washington Dining Survey

With the publication of the College Sustainability Report Card 2011, more than 1,100 school survey responses from over 300 institutions are now available online. In total, these surveys offer more than 10,000 pages of data collected from colleges and universities during the summer of 2010. To access surveys from other schools, go to the surveys section of the website. To see grades, or to access additional surveys submitted by this school, please click the "Back to Report Card" link at the beginning or end of the survey.

Date submitted: August 2, 2010

1) Total annual food budget (2009-2010). \$ 8,594,959

2) Please indicate the dollar amount spent in the 2009-2010 academic year on products within each category below.

Fruits and vegetables	\$1,109,524
Dairy	\$603,522
Eggs	\$155,890
Meat and poultry	\$1,160,984
Seafood	\$186,113
Coffee	\$351,500

## LOCALLY GROWN AND PRODUCED FOOD

3) Please check items that you purchase from local growers or processors.

We define "local" food as food that has been grown, raised, produced, or processed within 150 miles of the campus.

- Vegetables
- Fruits
- Milk
- Processed dairy products (ice cream, cheese, yogurt, butter)
- Grains and beans
- Meat
- Poultry
- Eggs
- Seafood
- Baked goods
- Granola/cereal
- Maple syrup, honey, etc.
- Beverages

- Sauces, spreads, hummus, salad dressing, etc.  
Other. Please describe: Vegan Protein from Garden Protein, located 131 miles north of the university in Richmond, B.C. Our chefs create delicious vegan entrees that are good for you and good for the planet.

4) What dollar amount of the 2009-2010 food budget was spent on purchasing food that was grown or raised locally? \$703,068

5) From how many local farms or growers do you purchase food (excluding on-campus farms/gardens)?

Number from which you purchase directly: 0

Number from which you purchase through a distributor: 11

Please specify name and location of distributor: Food Services of America, Kent WA, Charlie's Produce, Seattle WA

6) How much did you spend in the 2009-2010 academic year on purchasing food that was processed locally? \$2,703,201

7) From how many local processors do you purchase (excluding on-campus farms/gardens)?

Number from which you purchase directly: 20

Number from which you purchase through a distributor: 17

Please specify name and location of distributor: Food Services of America, Kent WA, Harbor Wholesale, Olympia WA, United Natural Foods, Auburn WA, Tim's Cascade Chips, Auburn WA, Charlie's Produce, Seattle WA

8) Do you source any food from an on-campus farm or garden? Yes

If yes, please provide details below.

Source: Patio herb and vegetable garden

Items procured: Fresh herbs and vegetables

Dollar amount spent: \$5,000

#### ORGANIC AND SUSTAINABLY PRODUCED FOOD

9) Please check items that you purchase that are organically grown or produced: "Organically grown or procured" can be defined accord to USDA or Quality Assurance International standards.

Vegetables

Fruits

Milk

- Processed dairy products (ice cream, cheese, yogurt, butter)
- Grains and beans
- Meat
- Poultry
- Eggs
- Seafood
- Baked goods
- Granola/cereal
- Maple syrup, honey, etc.
- Beverages
- Sauces, spreads, hummus, salad dressing, etc.
- Other. Please describe: chocolate, coffee, frozen entrees, tofu, soy milk, chai

10) How much did you spend on organically grown or produced food in the 2009-2010 academic year?      \$689,905

Please note: For questions 11-14, please indicate the percentage based on dollar amount spent in the 2009-2010 academic year.

11) Do you purchase cage-free/free-range eggs and/or confinement-free animal products?

Yes

If yes, please provide details below.

	Product name	Percentage purchased	Additional comments
Cage-free/free-range eggs:	Eggs, liquid, fresh	100%	Our eggs are produced at Wilcox Farms, which is located on the Nisqually Land Trust at the foot of Mt. Rainier. They are certified as Salmon Safe.
Confinement-free product 1:	Eggs, shell, fresh	83 %	
Confinement-free product 2:			
Confinement-free product 3:			
Confinement-free product 4:			

12) Do you purchase any vegetarian-fed animal products?      Yes

If yes, please provide details below.

Product	Percentage	Additional comments
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	name	purchased	
Vegetarian-fed product 1:	Beef patties	71 %	The majority of our burger concepts use natural fed Black Angus Beef from Blue Mesa and Misty Isle Farms
Vegetarian-fed product 2:			
Vegetarian-fed product 3:			
Vegetarian-fed product 4:			
Vegetarian-fed product 5:			

13) Do you purchase hormone- and antibiotic-free meat and/or dairy products? **Yes**

If yes, please provide details below.

	Product name	Percentage purchased	Additional comments
Hormone-free product 1:	Milk	100 %	All of our espresso bars use Darigold Farms. A co-op of family owned farms.
Hormone-free product 2:	Beef Patties	71 %	The tag line for this product is: "No antibiotics or added hormones-ever!"
Hormone-free product 3:			
Hormone-free product 4:			
Hormone-free product 5:			

14) Do you purchase seafood that meets Monterey Bay Aquarium Seafood Watch guidelines and/or Marine Stewardship Council Blue Eco label standards? **Yes**

If yes, please provide details below.

	Product name	Percentage purchased	Standard used	Additional comments
Seafood product 1:	True Cod from Alaska	13.9 %	Monterey Seafood Watch	Fish is processed in Seattle
Seafood product 2:	Salmon, wild caught	11.5 %	Monterey Seafood Watch	Processed in Seattle
Seafood product 3:	Shrimp, Pink and U.S.	12 %	Monterey Seafood Watch	Processed in Seattle
Seafood product 4:	Halibut, California & Alaska	4.5 %	Monterey Seafood Watch	Processed in Seattle

Seafood product 5:	Polluck from Alaska	10.6 %	Monterey Seafood Watch	Processed in Seattle
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15) Do you offer specifically labeled vegan entrees on a regularly scheduled basis? **Yes**

Please indicate whether your school offers specifically labeled vegan entrees. If yes, please provide the average number of labeled vegan meals offered each week.

98 from 23 food service locations at 36 food concepts on campus.

16) Please list and give the dollar values for any other sustainably produced food items you purchase that are not included above:

Product name	Dollar amount	Additional comments
Shephard's Grain	\$240,955	Wheat is grown in the eastern part of our state using sustainable no till farming. The wheat is processed in Spokane, Washington and shipped to two bakeries in Seattle that we purchase our bagel and breakfast bakery products from.

## California Polytechnic State University Dining Survey

Date submitted: August 23, 2010

1) Total annual food budget (2009-2010). **Prefer number is not published**

2) Please indicate the dollar amount spent in the 2009-2010 academic year on products within each category below.

Fruits and vegetables	\$807,281
Dairy	\$448,405
Eggs	\$448,405
Meat and poultry	\$1,187,203
Seafood	\$80,850
Coffee	\$101,032

### LOCALLY GROWN AND PRODUCED FOOD

3) Please check items that you purchase from local growers or processors.

We define "local" food as food that has been grown, raised, produced, or processed within 150 miles of the campus.



Freeze (SLO), G Brothers Popcorn (SLO), Miss Odette's BBQ Sauce (Paso Robles), SLO Maide Ice Cream (SLO), Cantaneo Brothers meats (SLO)

8) Do you source any food from an on-campus farm or garden? **Yes**

If yes, please provide details below.

Source	Items procured	Dollar amount spent
Cal Poly Organic Farm	seasonal boxes, spring lettuce, pickled beets, squashes	\$1,383

**ORGANIC AND SUSTAINABLY PRODUCED FOOD**

9) Please check items that you purchase that are organically grown or produced:

“Organically grown or procured” can be defined according to USDA or Quality Assurance International standards.

Vegetables	<input checked="" type="checkbox"/>
Fruits	<input checked="" type="checkbox"/>
Milk	<input type="checkbox"/>
Processed dairy products (ice cream, cheese, yogurt, butter)	<input type="checkbox"/>
Grains and beans	<input checked="" type="checkbox"/>
Meat	<input type="checkbox"/>
Poultry	<input type="checkbox"/>
Eggs	<input type="checkbox"/>
Seafood	<input type="checkbox"/>
Baked goods	<input checked="" type="checkbox"/>
Granola/cereal	<input checked="" type="checkbox"/>
Maple syrup, honey, etc.	<input checked="" type="checkbox"/>
Beverages	<input checked="" type="checkbox"/>
Sauces, spreads, hummus, salad dressing, etc.	<input checked="" type="checkbox"/>
Other. Please describe.	Soups, Frozen Foods, Macaroni & Cheese, Crackers, Olives, Chips, Rice Cakes, Energy/Nutrition Bars

10) How much did you spend on organically grown or produced food in the 2009-2010 academic year? **\$106**

Please note: For questions 11-14, please indicate the percentage based on dollar amount spent in the 2009-2010 academic year.

- 11) Do you purchase cage-free/free-range eggs and/or confinement-free animal products? **No**
- 12) Do you purchase any vegetarian-fed animal products? **No**
- 13) Do you purchase hormone- and antibiotic-free meat and/or dairy products? **No**
- 14) Do you purchase seafood that meets Monterey Bay Aquarium Seafood Watch guidelines and/or Marine Stewardship Council Blue Ecolabel standards? **Yes**

If yes, please provide details below.

	Product name	Percentage purchased	Standard used	Additional comments
Seafood product	Assorted Fillets	10%		

- 15) Do you offer specifically labeled vegan entrees on a regularly scheduled basis? **No**
- 16) Please list and give the dollar values for any other sustainably produced food items you purchase that are not included above:

By comparing these surveys multiple significant differences can be observed. Starting with the first question, *What is your schools annual food budget?* Notice that Cal Poly decided to not publish this number and University of Washington did. Why is this the case? What does this tell us about the transparency that exists between the consumers and the providers on each campus? The next question, the locally grown produce check box, shows us that Cal Poly did not list fruits, grains, or beans, but Washington did. This is striking because those three food items are exceptionally important in the day to day diet. Another fact to notice is that the University of Washington purchased from 11 farms through a distributor where Cal Poly made no purchases from a distributor of local farm products. However, Cal Poly did purchase from one farm directly and Washington from zero directly. For the local processors, Washington had 20 and Cal Poly had 16. Interestingly, of the 20 local processors Washington purchased from, 17 of them were through a distributor whereas only two of Cal Poly's 16 local processors were through distributors. In the budget section of the survey a few facts that jumped out at me were; Cal Poly's lack of publication of their annual food budget, Cal Poly spending more money than Washington on meat, poultry and considerable more amount on eggs. Another difference was Washington's greater amount of seafood purchases. Regarding the meat and dairy options on campus; Washington was much more supportive of sustainable products, with Cal Poly supporting none. Sustainable meaning organic, vegetarian fed, hormone/antibiotic free, or cage free. Cal Poly did source their dairy products locally, but that is as far as their support reached. Looking over this information further emphasizes the differences between the food options on the two campuses.

# University of Washington Setting

My investigation started with looking at the locations of the schools to understand their food shed and access to sustainable agriculture products. The University of Washington is located in the heart of Seattle, a major coastal city with a booming economy and a population of 3.4 million. With 80% of the citizens voting Democratic Seattle is one of the most liberal/progressive cities in the United States (Puget Sound Fresh). Seattle is also home to the nation's two largest online environmental magazines, Worldchanging.org and Grist.org. With regards to food issues, Seattle has numerous organizations and non-profits working solely on increasing support for sustainable agriculture in the city through a variety of methods.

The city government has passed multiple measures directly supporting the production, marketing, and consumption of local foods. On April 28, 2008, the Seattle City Council passed the Local Food Action Initiative which: expands resources for food banks; strengthens local farmers' markets; develops solutions that will reduce the cost of food for urban consumers by making stronger connections between rural and urban areas; plan for better management of the food system in emergencies and disasters. Also, in 2010, the Seattle City Council approved Council Bill 116907 that supports the rapidly growing local food movement by updating the City's land use code governing urban agriculture uses, including allowing "urban farms" and "community gardens" in all zones. The code also allows residents to sell the food they grow. Both of these initiatives had support from all council members. There is clearly a large demand for local sustainable produce in the city which is reflected by the government support and by many organizations working towards supplying for this demand and educating consumers.

My research led me to numerous websites of organizations providing leadership, research, and assistance for the increase and improvement of local and sustainable products, some focusing on consumer education and others on making changes in the institutions and distribution systems. An organization that is working statewide on research and education is the Cascade Harvest Coalition. Their mission statement is; "to re-localize the food system in Washington by connecting consumers more directly with producers. We help farmers by connecting them with the tools and resources they need to be more sustainable and provide timely information to consumers so they can make informed food buying decisions." An impressive study they worked on is the Puget Sound Food Project. In 2007, they undertook the first comprehensive analysis of the Puget Sound food system. The primary goals of the project were to: (1) develop a strategic planning process to bring together producers, food buyers, business leaders and local decision makers; and (2) assess the feasibility of a multi-purpose agricultural production center for local Puget Sound producers. Another impressive group in the Seattle area is Puget Sound Fresh. Established in 1998 with funding from the King County Agriculture Commission, they assist local farmers in the 12 counties that surround Puget Sound by marketing their products, which assists them to keep their land in production and encourage development of new farm enterprises. Their website is very instructive, containing extensive information of all the farmer's markets, food

cooperatives and restaurants that provide sustainable food in all 12 counties. There were five other similar groups with websites all promoting sustainable agriculture and local food sheds. Another important aspect of Washington's sustainable agriculture comes from Washington State's dedication to organic agriculture research.

Washington State University was the first school in the country to establish a four-year major in organic agriculture. In the 1970's, WSU was a progressive institution in researching and compiling information regarding tools, organic solutions to agricultural production and sustainability challenges. To this day the school remains on the cutting edge of organic research and continues to connect the public to organic agriculture resources, information and experts. An example of WSU's leadership in organic agriculture research is The WSU Center for Sustaining Agriculture and Natural Resources (CSANR) which has 50 faculty and staff from a variety of disciplines involved in research, teaching and extension. Their work is located throughout the state, providing Washington with local, relevant and applicable data. The message that came across through my research is that there is no lack of support in Seattle or in the state of Washington for sustainable agriculture. In fact, there is unification regarding the cause, across the disciplines, institutions, and citizens. I investigated Cal Poly's location with this same approach; looking at the city's and states social and political landscape.

## Cal Poly Setting

California Polytechnic State University is located in San Luis Obispo, tucked in California's Central Coast. With a population of 44,750 people, San Luis Obispo is significantly smaller and less diverse than Seattle. 81 % of residents are white and 33 % are between the age of 18 and 24. Politically, San Luis Obispo is located in the 15th Senate District of the state legislature, and in the 33rd Assembly District, both represented by Republicans. Federally, San Luis Obispo is located in California's 23rd congressional district, and is represented by Democrat Lois Capps. The Democrat Party is not the dominating party in this city or area, instead there is fairly even split between Republican and Democrats that contrasts Seattle's political climate. When investigating the local food movements of the area there were significantly fewer groups and organizations working towards encouraging sustainable agriculture for San Luis Obispo. The most significant group I found is the Central Coast Grown organization. Their website contained a list of farmer's markets, restaurants and grocery stores to support, and a list of seasonal food. Their mission statement includes: (1) Educate consumers about the nutritional, environmental, and economical benefits derived from purchasing locally grown and processed agricultural products. (2) Increase consumer awareness and understanding of the significance of the Central Coast Ag Network logo as a method to identify locally grown and processed agricultural products. (3) Raise community awareness of and commitment to healthy, local food.

# State Comparisons

I found many more resources at the state level. Community Alliance with Family Farmers (CAFF) is the most powerful organization with a mission statement: “to build on the movement of rural and urban people who foster family-scale agriculture and care for the land, sustain local economies and promotes social justice.” This group started in 1978, as the California Agrarian Action Project (CAAP) and organizing demonstrations and sit-ins in support of farmworkers in dire economic straits because of unemployment due to the use of the mechanical tomato harvester (CAFF). It has evolved into an influential group with programs reaching all over California. A couple of campaigns they have been integral to include Farm to School and Buy Fresh Buy Local label. The Farm to School program seeks to provide public schools with healthy whole foods from local farms, and the Buy Fresh Buy Local label aims to strengthen the markets of family farms and assist consumers with purchasing local foods. The first institutional member of the Buy Fresh, Buy Local Campaign on the Central Coast is the University of California at Santa Cruz. In the past two years, UCSC has shifted from sourcing less than 1% of produce purchases from local, sustainable farming operations to over 20% in 2010. CAFF is also working with Kaiser Permanente to develop a pilot sourcing program to provide fresh, local produce for 19 Northern California hospitals. Although there were fewer groups directly associated with San Luis Obispo’s food shed there is certainly a plethora of organizations and institutions working to move California’s food system to become more sustainable.

University of California Davis, much like Washington State University, has been at the forefront of research in organic and sustainable agriculture for the state and the nation. The Sustainable Agriculture Research and Education Program was created through grass roots efforts of organizations and individuals concerned about the environmental impacts of agriculture, the health of rural communities, and the profitability of family farming operations in California. The two goals of SAREP are: (1) To assist California farmers and ranchers in developing and implementing sustainable production and marketing systems; and (2) To support California's rural and urban communities in understanding the concept and value of sustainable agriculture and participating in sustainable food and agricultural systems. The variety of publications produced by SAREP is hard to overstate. There are research papers on a variety of agricultural related issues including; Farm to School case studies, and cover crops for organic walnuts. The data collected has been a large contributor to California’s booming organic industry and local food movement. California and Washington have substantial support and research in organic and local food systems. The importance and presence of agriculture in the states can be seen in the following fact sheets.

## Washington Agricultural Facts 2010

- WA ranks 12th in the nation in terms of total agricultural cash receipts, but is second only to California in the diversity of crops grown (about 230 different ones).
- WA's highest dollar crop is apples. This state produces 57% of all the apples in the nation.
- Milk is the second most valuable agricultural commodity, followed by wheat, potatoes, and cattle and calves.
- WA leads the nation in the production of several crops: 92% of all raspberries are raised here, 77% of all hops, 75% of the nation's supply of spearmint oil, 51% of sweet cherries, 46% of concord grapes, 46% of pears, 41% of all peppermint oil, and 38% of all prunes and plums
- Other crops grown include: barley, alfalfa hay, corn, lentils, onions, wine grapes, apricots, peaches, canola, garbanzo beans, blueberries, aquaculture, forest products, and many varieties of vegetable seed.
- Number of Farms: 39,500
- Average Farm Size: 381 acres
- Total Farmland: 14.9 million acres
- Total Organic Crop Acreage: 92,555, with forage vegetables and tree fruit dominating
- <http://www.agclassroom.org/kids/stats/washington.pdf>

## California Agricultural Facts 2010

- California is the nation's top agricultural state, and has been for more than 50 years. Agriculture generates approximately \$36.2 billion a year, more than any other state.
- Number of Farms: 81,500, less than 4 percent of the national total. More than 23 percent of CA farms produced commodity sales totaling \$100,000, compared with 17 percent for the U.S. as a whole
- Nine of the nation's top 10 producing counties are in CA. The sales of these nine counties accounted for 6.6 percent of the nation's total sales value.
- More than 90 percent of CA farms are family farms or partnerships
- Average Farm Size: 312 acres
- Total Farmland: 25.4 million acres
- Organic crops : 430, 724 Organic producers: 2,887
- More than 400 commodities.
- Grows more than half of the nation's fruits, vegetables and nuts.
- Leads the nation in milk production with over 1.8 million dairy cows, \$6.92 billion in cash receipts.

- Year- round crop seasons include lemons, artichokes, avocados, broccoli, cabbage, carrots, cauliflower, celery, lettuce, mushrooms, potatoes, spinach and squash.
- Commercially-produced only in CA: almonds, artichokes, dates, kiwifruit, figs, olives, persimmons, pomegranates, dried plums, raisins, clingstone peaches, pistachios, sweet rice, ladino clover seed, and walnuts.
- Livestock and poultry account for about 27% of CA gross cash income, with a combined total of \$10.6 billion.
- <http://www.agclassroom.org/kids/stats/california.pdf>

Reviewing these statistics highlights both states enormous agriculture industries, and their definite abilities to supply their populations with food. Looking closer at the schools food sheds further emphasizes this fact. Of the top ten agricultural counties only three of them are farther than 150 miles away from San Luis Obispo and the county produces a great deal of food as well. You can find a farmer's market every day of the week in San Luis Obispo County and shop at multiple stores every day that source local organic produce. Seattle's King County is similar in this regard, there are farmer's markets every day and in the city there are numerous stores supportive of sustainable agriculture. It is clear that both schools are located in cities with a great deal of available local food. However the institutions reflect this differently, with the University of Washington's dining service sourcing significantly more sustainable products.

## Discussion

The next part of my investigation was an interview with the two schools dining executives, who do all the purchasing for the campuses. Unfortunately neither schools head chefs got back to me, both stating a lack of time to answer my questions. This was extremely disappointing for my research, but perhaps reflects one of the complications with supplying sustainable food on campus. The task of providing 20,000 or 40,000 people with food is undoubtedly time intensive, leaving little time to chat with a person who is simply curious. Through my own research I tried to focus in on what the differences were between the dining programs based on information found on their websites.

Both schools operate their own dining services, but the structure of the programs differs greatly. The University of Washington's program is through the Housing and Food Services. This group focuses solely on dining operations, catering events and student housing operations and is a department within the school. Cal Poly's dining program is run by the Cal Poly Corporation (CPC), a nonprofit, financially separate from the university. The corporation is organized to support the educational mission of the school by providing a variety of services. Also the CPC does not receive funding from any state sources for its operations and employs over 1,500 students, faculty, and staff, making it one of the largest employers in San Luis Obispo County. There are two divisions to the corporation, Commercial Operations and Fiscal and Administrative

Services. Within the Commercial Operations lies the Campus Dining operation, along with El Corral Bookstores, Cal Poly Print & Copy, Educational Web Services, and the Housing Corporation. The Fiscal and Administrative Services division handles a long list of educational related programs, conferences, workshops, and trust and investment services. Cal Poly's dining program is just one of the many services the corporation organizes for the campus. Washington also has a foundation, whose purpose is to serve the educational goals of the campus, but the difference is that its only duties are to raise funds; it is not in charge of any of the actual services on campus. Sustainability tabs can be found on both school's websites, but University of Washington's is more extensive. On the home page the sustainability link is equally obvious as the others, where as Cal Poly's sustainability page is two clicks away. As a student at Cal Poly I feel that there website is misleading and exaggerates the accessibility of local organic food on campus. They claim that Campus Market is the place to go for this type of food, but the options here are extremely limited with the majority of the store dedicated to processed foods such as chips and sodas and the produce is most often not from a local farm. I have never eaten at the University of Washington, so it is possible that they too exaggerate their dedication to sustainable food sourcing. Another difference in the school's food programs is that the University of Washington is a member of the Farm-to-College program and Cal Poly is not.

The Farm-to-College is a program started by the Community Food Security Coalition. The coalition is composed of more than 300 organizations working from the local to international levels to build community food security. Farm-to-College provides support and resources for universities to tap into their local and regional food systems. Their website contains profiles of participating schools with information on the various aspects of their food system. Looking over the University of Washington's page, I found useful information regarding how Farm-to-College goals are integrated. The dining services director is in charge of the program and the head chef is the lead contact. Cooperative extension agents serve as the facilitator for certain program components, and help with outreach. The locally purchased products come from region-wide (e.g., Midwest, Pacific Northwest) and the products are used in catering, convenience store items, regular menus, and special events. Starting the program required external funding such as grants. Community, local, state environmental organizations, and farmer associations are involved in coordination, education, development, and promotion of the program. There are bidding requirements for purchasing local foods and these products cost more on average. Some significant barriers to starting and sustaining farm-to-college include: getting farmers approved through a food service company, coordinating purchase/delivery of products, engaging students, finding growers/local product supply, resolving insurance needs, product price, product quality, product quantity, seasonal availability of products, and getting administrative support. The benefits of the program include: higher quality food, meeting desire and demand from customers, opportunity for student education and research, good for school and company public relations, and supporting local farmers, community and economy. The University of Washington's chef identified two policy issues that would provide the most support to their program: federal and state policies providing incentives to state institutions for purchasing locally grown products, and more leniency in bidding regulations. One strategy recommended to make farm-to-college successful is to incorporate 'buy local' requirements into food

service contracts. When starting the program Washington collaborated with the Community Food Security Coalition, the Washington State Department of Agriculture Small Farm and used a direct marketing program. The fact that the University of Washington is a part of Farm-to-College and that it is their head chef and dining director in charge is an important quality of their program. These individuals have the knowledge of the details of purchasing and supplying and the power to implement change on campus.

## Conclusion

My comparison of the food systems on California Poly Technic and the University of Washington has highlighted some similarities and differences. Both campuses are located in areas with an abundance of organic local food year round. There are organizations near both schools that are working towards improving the connections between farmers and consumers and there are numerous options off campus to eat sustainably. Cal Poly's dining program is run by a corporation that deals with numerous other school services. In contrast, Washington's dining service is run by a department of the school that focuses on food and housing. The difference in division and management of dining services could be a significant influence on sustainable food sourcing. The multiple levels of organization could make change more difficult to pursue and achieve. Demand certainly plays a role in the food options as well. Consumers vote with their dollar and if students at Cal Poly were more insistent with asking where food comes from perhaps the options would begin to reflect their values. Another significant element is Washington's administrative support to supplying sustainable food. Having a head chef and dining director as leaders of their campus Farm-to-College is extremely influential. This demonstrates their commitment to improving their campuses food system. Moving our industrial agriculture scheme towards a more sustainable model is not easy, but public institutions such as schools are an important place to start. Universities are where citizens learn about the issues in our world and how to develop and implement solutions. Demanding change to the food system at the campus level is reasonable because students pay for the entire campus experience

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