

Student Run Farm Marketing Plan, Fall 2014

Ag BM 302
Ashley Lansdowne
Mike Schnur
Sean Busko
Ruobing Zhang
David Frey

Introduction

A Student Farm on Penn State's Campus would create an educational experience for research while running actual operations to serve on campus dining halls with fresh produce. Food and



dining halls on campus attract much attention from students, administrators, and even large food companies. Today, 'naturally grown' products are becoming widely demanded by consumers. According to a Roper (2011) survey, forty percent of Americans said organic food would be a bigger part of their diet within the next year and 63 percent buy organic foods and beverages at least once in a while.

With this dramatic increase in demand for 'organic' and 'naturally grown' products, the food market will be forced to switch to producing more natural products to keep up with demand. In order to meet this demand, a Penn State University Student Run Farm will begin the response to supply these food products. Locally grown vegetables will be easily delivered to campus dining halls. All of these products will be naturally grown under USDA regulations. In order to be sold and labeled as "Certified Naturally Grown," the produce must be processed and handled without the use of synthetic substances and ingredients, ionizing radiation, and sewer sludge (USDA). This USDA seal verifies to customers that the product has followed the regulations of being called 'natural.' We will work with exact dining hall produce demand limit any products going to waste. According to the Environment Protection Agency (2011), Americans waste 36 million tons of food annually, leading to \$165 billion of food in wasted costs (NationSwell). By accounting exactly how many pounds per vegetable the dining hall will require per week, which will vary throughout the year, we will consider the feasibility of distributing that amount in hope that none will go to waste.

Business Idea

About 40 years ago, Penn State had a Student Farm. Since it has closed, Penn State's Sustainability Institute has been working over the past 10 years to begin a new farm. Students and faculty have been making progress by holding weekly meetings to discuss the objectives and hurdles of the plan. Making the farm feasible and successful in the future remains an important factor to consider when planning the details. Students, faculty, and members of the community show interest in running the farm on campus. Creating a 3-acre farm with a small warehouse and garage located behind the Arboretum will be the perfect start to the Penn State student run farm. Faculty members and at least ten different students will run The Student Farm. The students will be able to conduct research, work and understand the farm processes. As an initial business, three products will be grown including lettuce, tomatoes, and carrots. Our farm will grow each vegetable on 1 acre of land and will be marketed to on-campus dining halls. The farm will produce approximately 9,100 pounds of romaine lettuce, 19,400 pounds of carrots, and 40,000 pounds of tomatoes. A goal for the future is to expand the farm by growing a larger variety of vegetables, fruits, and also herbs. As listed in the pricing section, we will have a close relationship with the Penn State Food Services where we will work with them on pricing our products. Since prices fluctuate so often, it is hard to tell what prices we will charge at this point. Convenience and quality are two key factors, which our farm will inhibit. The vegetables will primarily be placed in the salad bar of the Redifer dining hall. From the dining commons, students and faculty will purchase a dining meal plan, or pay on the spot to eat from the salad bar.

Our client, Penn State Food Services, currently buys bulk fruits and vegetables from large distributors. These vegetables take three to four days to be delivered to the dining commons. Located within a five-minute drive away from Redifer, the delivery time will be extremely short. The Student Farm will provide students with a hands-on experience through internship research and volunteer-work share opportunities. By volunteering, students will have the opportunity to work at the farm and be assisted by faculty members. The farm will provide education on agriculture, sustainability, and how to promote the support of local farming in the community.

Penn State Student Farm Mission Statement

“To educate, promote sustainable farming, and provide empowering engagement to students through a hands-on experience with sustainable farming.”

Our mission is to bring together more students than those in the College of Agriculture. Along with students in the College of Agriculture, The Student Farm will need volunteers from students majoring in Engineering, Architecture, and even students studying Business. By bringing all of these volunteers together, we will be able to get a wide perspective of how to operate the Farm as a whole. The purpose is to provide hands on experience for Penn State students and to convey sustainable farming to Penn State’s campus. The Dilmun Hill Farm on Cornell University’s campus, has been running for over a decade. This farm focuses on engaging student involvement through the farm. Researching the success the Dilmun Hill Farm has created validates the proposal of the Penn State Student Farm. Our primary goal is to absorb students into the real life aspects of sustainable farming.

Target Market

Since our target market relies on the purchases of Penn State students, we will be targeting our product specifically towards students who eat on campus. We take into account students’ dining hall preferences as revealed in survey data. Along with the students, we will be marketing to the dining halls themselves. The end user will be the students, but the produce is going to be purchased by the dining halls.



Figure 2: Natural product preference



Figure 1: Redifer frequency of visitation

We surveyed 29 current Penn State students. We asked students eight questions in an online survey about their preferences towards fresh produce and eating on campus. Of those polled, 62.07% said they would prefer all-natural products rather than non-natural products. This shows that students have a strong interest in eating our naturally grown vegetables if they were available in the dining buffet.

From our research, 91.67% of students who eat on campus said they would eat at the dining commons more often if the produce was supplied from the student farm.

When promoting our products to the dining halls, we will benefit from this survey by explaining how naturally grown produce would increase demand from students who eat on campus.

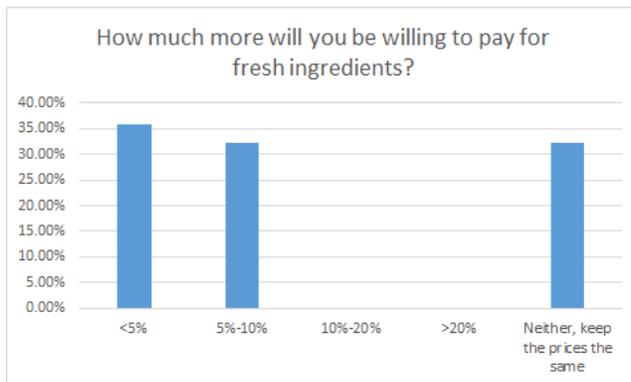


Figure 3: Price sensitivity for fresh produce

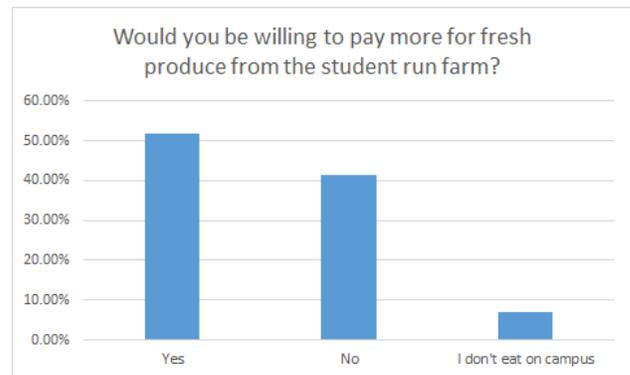


Figure 4: Price sensitivity for farm products

College students are typically money conscious when it comes to spending on food. Most students spend as little as possible on food while in college. For the most part, students who eat on campus are underclassman. This chart shows that the majority of students would be willing to pay around 5%-10% more to eat fresh produce delivered from the on campus farm. By knowing students are willing to pay more, we know there is a demand for naturally grown products. Because Redifer will be experiencing increased traffic, and will be paying the same as another vender for the produce, they stand to gain profits from this arrangement.

Marketing Mix

Competitive: Although small-scale, the farm has to maintain a level of competitiveness in order to be a viable option for the dining halls to purchase. The produce will be purchased in the quantity needed for the price offered by the best bid from the major food distributors already being used. The other competitors are large produce companies such as East Coast Fresh Cuts,

Clarion Produce, Class Produce, and White Knight Produce. Penn State Food Services utilizes these companies weekly to make their produce purchase for the entire campus. The farm can remain competitive by providing fresher, higher quality produce, maintaining a good working-relationship with the dining commons, and offering reliability in product quality as well as delivery times. Other companies' bids given to the dining halls include transportation costs, which will be much lower for the Student Farm, giving the farm a competitive advantage. Labor for the farm will also be almost entirely run by student volunteers, which will help to keep costs low. Faculty will be hired to teach students as well as supervise activities on the farm. A certified driver or drivers for the delivery truck would be hired.

Politico-legal: There are not many legal regulations for produce other than maintaining health standards. We will have to meet FDA guidelines and procedures for handling and distributing food. As mentioned in the business description, the USDA regulations for natural products will be followed in order to maintain legal processes. Produce will need to be cleaned and inspected according to FDA guidelines. The dining halls are already certified to handle foods. This could be used to our advantage by delivering the unprocessed, raw produce to the dining halls and having them prepare it. Produce will have to be tested periodically to ensure safety. Storage facilities and the delivery truck will also have to be checked to ensure sanitary conditions are maintained.

Economic: The economic environment looks positive for fresh produce in Penn State dining halls. The market will not have huge growth, but is very stable. Penn State student enrollment has been steady at just over 45,000 students for the past several years. The trend lately has been towards locally grown, sustainable food products, so our produce should be in demand. Consumers are also more health conscious than ever, so this is an excellent time to enter the market. Also, as our survey shows, students are willing to pay a slightly higher price for these products. This market is very stable, as Penn State is a well-established university with a successful system of dining halls already in place.

Technological: Despite a small-scale student farm, our plan is going to implement innovative techniques for sustainably growing produce. Technology has been advancing rapidly in the

current environment, allowing for higher production at less cost than before. The farm will also be able to produce more in the spring and fall seasons than most conventional farms due to modern farming methods. This will be very important for student involvement, since students will be working mainly over the standard school year. We will also utilize resources available from the university, such as knowledge of staff and faculty, as well as other colleges other than the College of Agriculture that can become involved. Our farm will mostly employ hand labor. The seeds will be sewed by hand, with the help of a small tractor to till the soil. The produce will be picked by hand, washed by hand, and taken to the storage facility and stored appropriately by hand. A truck will be used to deliver the produce.

Socio-cultural: In general, consumers and the public look favorably upon fresh produce. Because it is small-scale and “home grown”, it is perceived to be healthier and more sustainable. This can be seen in the locavore movement, which seeks to promote locally grown produce. This can reduce a farm’s transport costs and carbon footprint, as well as reduce preservatives and chemicals used on food. Penn State will not face any backlash from serving it, and, if anything, will gain favor with consumers. Due to the perception of higher quality, consumers will hopefully be willing to pay slightly more for the farm products. Penn State’s culture focuses on modern, forward thinking, as well as pride in the school. The farm will play into this as it is an opportunity for students to be involved in or support sustainably grown local produce, and this is an area for all involved in Penn State to show pride.

SWOT Analysis

<p>Strengths</p> <ul style="list-style-type: none"> -USDA Organic Approved -Local-within 3 mile radius of retailer -Delivered weekly -Educates and provides opportunities for students -Differentiated products -Volunteer Labor -High level relationship with buyer -Buyer-specific specialized products 	<p>Weakness</p> <ul style="list-style-type: none"> -Low yield -Limited brand awareness and products -Leadership -Limited number of crops makes yield volatile -Complicated business model -Financing to outside entities
<p>Opportunities</p> <ul style="list-style-type: none"> -Expand product horizon -Business expansion by selling produce at local farmers markets or other dining halls. 	<p>Threat</p> <ul style="list-style-type: none"> -Existing suppliers could switch to naturally grown products -Larger suppliers could drastically cut prices. -Differences of different stakeholders needs -Weather conditions

Strategy Statement

As a second mover, we will promote our products as an option over larger produce distributors. The produce we harvest will be specialized specifically for the Redifer Dining Commons. Fresh, locally grown vegetables improve on existing suppliers and gain advantage in the marketplace.

Key Planning Assumptions & Goals

Realistically, like any business, the farm will lose money when it first begins. But, in future years, the farm will have a goal of keeping good relations with the on campus food services and to provide an educational hands-on experience with students. Although we will be making a small profit from the farm, this money will be put into making the farm continue running.

Another goal is to eventually have more than lettuce, tomatoes, and carrots being grown on the farm. We hope to eventually be able to produce strawberries, asparagus, basil, broccoli, cauliflower, chives, cilantro, eggplant, leeks, and mint. If we created a larger line of produce, we can eventually sell to more dining halls or even local farm stands. Once the farm expands, we will plant more vegetables, fruits, and even herbs depending on the current demand from the dining hall kitchens. As of now, our goal is to create a 3-acre farm and produce an acre of each product including lettuce, tomatoes, and carrots. Currently, these three products are available in the dining buffets for breakfast, lunch and dinner servings. A 3 acre farm may not produce all of the products the dining halls need, but food services will purchase what we have in order to use up our supply. Therefore, Penn State Food Services has already agreed to purchase our produce, making the Student Farm worthwhile.

Promotion Mix

Product: Our product will be organic food from the student run farm. Because our product portfolio only consists of three different items, we will focus and rely on there being a large quantity of each item. It will be important to sell the product specifically on the fact that students are producing this food sustainably and through organic means. This could break into an untapped market of students who are environmentally concerned and conscious. The three main crops that would be grown most effectively and the best fit for the dining hall are tomatoes, carrots, and lettuce. These crops would work together to make good options for a salad bar in the dining halls. Not only are these healthy choices, they are appealing for the dining halls because with the right backing, there may be a chance for university subsidies for these foods since our crops will not require as much transportation the dining halls most definitely could offer a lower price for the bulk of our product. We are also at an advantage because although we may not be able to fill an entire order, the Student Run Farm can fulfill part of the order. When the farm develops and earns more money tending to allow seasonal extension growth can be utilized. These three crops will be produced on an acre each. We hope that this land can be used as efficiently as possible.

Price: To understand how we make our pricing strategy, it is important to understand that unlike a regular firm, the goals of our business are not making money and growth in business scale. We want to make profit just enough to keep the farm running. Making huge profit is not the priority since the farm contributes to a graduated program. We are expecting long-term growth while surviving in the business because a graduated program needs to last for years.

Therefore, our pricing strategy needs to cover the following goals.

- We want our price to be affordable to the dinning commons.
- Our price should be high enough to make profit to cover our costs.
- Our price should be controlled at a steady level in the long run so as to build long-term relationship with dinning commons.

Our predicted prices are shown below.

Product	Yields (lb/acre)	Our Predicted Price (\$/lb)	Wholesale Price Dec. 5(\$/lb)
Romaine lettuce	9100	\$2.40	\$1.98
Carrots	19400	\$3.00	\$1.04
Tomatoes	4000	\$3.60	\$3.09

There are no barriers for our entry, but there are many other sellers. Our prices for the three products are probably going to be higher than our competitors in the market because the student farm is too small to spread fixed costs to large production even though our fixed cost is relevantly lower than average because of the lower labor cost.

It is hard for us to use perfect competitive strategy to determine our prices. We will try our best to match the prices paid for these goods. Unfortunately it is hard to accomplish mainly due to the small scale of production. Usually the dining halls do not tolerate a large increase in price for a seemingly undifferentiated good. However, school's dinning commons are likely to support us because of the fact that all of our products are "PSU Grown." Although we are not sure "PSU Growth", our main source of differentiation can put how much added value on our products, it is still the best chance we have to survive in the market.

We may also apply skimming strategy if the scale of farm increases. Comparing to the price for Dec. 5th 2014 (Park Slope Food Coop) our price offered above is higher than regular organic vegetables and dining commons may lose interests in supporting the Student Farm in the future because of the price. Decreasing the price in the future is the key to transforming our relationship with dining commons from helping us to cooperating with us.

After the farm is in operation, we are going to implement a breakeven analysis to determine how much produce we need to sell in order to make the farm profitable. The farm will have lower fixed costs than average due to the high involvement of volunteers and the amount of money donated. This method will not take into account demand. It is unrealistic for the farm to be profitable in the first year of operation, but proper pricing will allow it to be a viable business and turn a profit in the future.

Place/Distribution:

1. Storage Facilities

For storing produce before transportation there are several important steps:

- Take time to properly store items
- Avoid direct sunlight (prevents over-ripening and rotting)
- Store in bags in fridge, not loose (prevents wilting)
- Separate by type
- Freezer/fridge is best place to store produce, but ultimately varies by type.
- Separate fruits/vegetables

Lettuce: loose in sealed bag, do not stack

Carrots: shredded, in seal bag

Tomatoes: not fridge, cool place, short life

Area designated for short/long term storage of produce not needed immediately by dining commons. A refrigerator is a necessity for storage.

2. Inventory

Due to the perishability of our products, we will only be holding a limited stocks. Only the produce needed for the next delivery or two would be available at the storage facility to ensure

freshness. As demand increase, more produce will be harvested. Employees will keep track of inventory on checklists as it comes and goes.

3. Transportation

For the transportation of the produce to the dining hall, a small box truck would be used. Due to the close proximity of the farm to the commons, the truck would not need to be refrigerated. Deliveries could be scheduled for specific times and dates, or, because of this proximity, deliveries could be highly flexible. It would not take very long to make a delivery. The food chain from farm to dining hall is very short and efficient, allowing for maximum freshness and minimal spoilage and rotting for very perishable goods. The produce will be located in such close proximity to the end user that minimum to no preservatives will be necessary. This also means that food will be extremely fresh, going from farm to dining hall in as little as a few hours. This will, in effect, make the produce healthier due to the minimal amounts of vitamins and nutrients lost due to decay.

4. Utilization and Packaging

The produce from the farm will not be sold directly to the consumer, so packaging can be utilitarian. Products will be provided in convenient quantities and form as required by the dining commons. The quantities delivered will be small enough that efficiency of packaging will not play a role. Packaging could also be recycled to further increase the sustainability of the farm.

5. Communications

The dining commons will provide the farm will information about demand, supply, volumes, stock, price and movements as needed and consumer preferences change. Because of the proximity and affiliation with Penn State, the communication channels should be easy and efficient. The dining commons may require a contractual obligation, most likely a production contract.

Promotion: We will be promoting our products to the on-campus dining halls and also to Penn State students. Our first promotion goal will be to provide direct information, considering this will be a new concept for the consumers. Through advertisements and hosting on campus events, we will attract students to want to participate in the Student Farm. We will also focus on accentuating the product's value. Since the produce will be very similar to the produce consumers already buy from wholesalers, we needs to focus heavily on advertising out products

to make them differentiated. By doing this, we will create advertisements and commercials that show how fresh produce makes dining hall meals taste like meals from home. This type of advertisement will target our market of student's who live and eat on campus. By relating the fresh produce to meals they

Missing home? Maybe it's the homemade cooking you miss.



Enjoy homemade dinner at Redifer made with fresh ingredients grown right on campus at the Penn State Student Farm.

might eat at home, students will be attracted to purchasing meal plans from the dining halls. The goal of this ad is to gain interest in students wanting to eat in the on campus dining halls. This ad will be successful because it will remind students that meals at college can be balanced and healthy while also tasting good. Another advertisement we've created will relate the school spirit of Penn State to the success of The Student Farm. Our school has a great amount of school pride, which we use to get students excited about the Farm. When students think about the farm, we want them to be aware of the natural growing processes we have for our vegetables. We also want them to think of environmentalism and sustainable farming practices related to the farm. Ads like the one shown on the left will motivate students to support sustainable farming and naturally grown vegetables while also keeping up the school spirit. This ad will be successful because it gives the opportunity for students to contact us to volunteer to work on the farm



We will also inform the dining halls how much of each item we will be able to provide. The Student Farm will begin in the introductory stage, which requires a lot of informative communication to the consumer. These vegetables will require a push strategy at first. Since this is new to the market, we will need to push our buyers

to increase their demand for the product. As the manufacturer, we will push products through the

distribution channels by promoting the dining halls, or retailers, to purchase our locally grown vegetables to provide to students, or customer. We will create the message that these products are fresh, naturally, and locally grown right on campus. For advertising, creating flyers and posters for students on campus to read will be inexpensive yet effective. We will also place an ad describing our motive in the local newspaper, which students read on campus every day. By using inexpensive methods of advertising, we can target students that have an interest in eating in the dining halls. For a sales promotion, we will offer students a cheaper rate if they buy an entire meal plan, instead of just purchasing food from the dining hall once at a time. A great way to gain interest in this is to have a specific menu once a month that has a specialty dinner made with only products from the Student Farm. This will gain student interest by explaining to them that their meal for that day was produced right on their own campus. This will raise awareness to entering students about the Student Farm. As our school has a huge amount of school spirit, students will be very interested in eating products made right on campus. Public relations are important on the retailer's side and the consumer's side. We will be working closely with the dining hall staff in order to maintain good relations with them. By doing this, we can figure out what products they might want and hopefully cater to their needs. We also need to keep close relations with the customer, or students who eat on campus meals. By sending out surveys and handing out salad bar coupons, we can keep close relations with the students and see what vegetables they may prefer in the future. Personal selling would be a great way to provide detailed information to consumers while also attracting their business. For this, we will create a presentation to show potential consumers what the student run farm is all about. This presentation will be for the public and will hopefully gain interest in supporting the on-campus farm. Lastly, we will create a brand identity with our symbol. We will put this image on all our promotional items and make sure students associate this with The Student Farm. By repetitively using this same picture, we will create an identity for the Farm.



Market Segmentation Strategy

Since we plan to sell wholesale produce to the dining halls there are not many segments to focus on. We will simply provide for the dining halls by conveying that our goods are superior to that of our competitors and that they will be readily available whenever needed. We hope to cater to this segment by providing cheap bulk product that can rapidly be

transported whereas some of the competition has to travel hours with the product. This lack of travel expense will allow for more competitive pricing to the dining halls.

Strategic Planning/Financials

Our strategic financial planning revolves how much we will be charging for our products. Currently, products have clearly defined specifications when ordered. Food services competitively bids prices from different wholesalers. By doing this, they cherry pick to find the lowest vendors. The supply chain process is limited because produce is purchased directly from the wholesaler. Also, by purchasing such large volumes they are able to purchase products at lower prices than retail stores. The dining halls currently receive deliveries every Tuesday and Friday. After meeting with the pricing staff, we were informed that the products from the Student Farm would be the first source of produce for the dining halls. If we did not fulfill their entire demand for produce, they would order the rest from a wholesaler. Realistically, it is hard to determine what prices our products will be sold for since prices fluctuate weekly. But, we can say that we will always be a preferred customer to the dining halls. The Student Farm will start with donations and financial statements will need to be all planned out.

Income Statement		
May 1st to August 1 st		
Income		
Sales of Crop Products		50,000
Subsidies		25,000
School Monetary allotment		200,000
Total income		275,000
Expenses		
Seed		5,000
Fertilizer		5,000
Packaging		500
Marketing costs		1,000
Distribution/ Transportation		1,000
Depreciation		3,000
Total Expenses		15,500
Net Profit		259,500

Balance Sheet	
Farm Assets	
Carrots	58,200
Lettuce	21,840
Tomato	64,000
Supplies/packaging	7,000
Short Term Assets	151,040
Machinery/Equipment	7,400
Land and Improvement	190,000
Intermediate Assets	197,400
Total Assets	348,440
Farm Liabilities	
Accounts Payable	200,000
Long term Loans	50,000
Operating Expense	10,000
Utilities	30,440
Equipment Upkeep	58,000
Total Liabilities	348,440

Problems

Pricing products for our farm program was a bit of a challenge. Since there are many variables, such as seasonal growing conditions and the constant fluctuation of prices in agricultural commodities, it was difficult to decide on a reasonable price to charge for these products. Currently, the food service department orders produce weekly. Prices fluctuate in the market every day; therefore they order produce weekly to make sure they get the best prices. For us, food services will charge our produce for the same amount of the lowest wholesaler that week. Another problem we faced was working with outside sources. Since we are creating this marketing plan for an actual proposed idea, it is difficult to factor in all the variables regarding size, budget, and what products should be produced. Finding and implementing adequate labor over the summer months (which will be in the beginning peak growing periods) may be very difficult. Storing the crops until the dining commons is ready to utilize them may also be problematic. Finding funding for the farm also may be problematic for expansion. There also will not be any storage units in the foreseeable future so this may be an issue.

Conclusions

Overall, the Student Farm will create more than just an opportunity for students to learn about farming processes and production. The student farm has potential to be a very lucrative business. It will take time but after the initial startup, when buildings can be added and the amount of available crops become larger the farm may potentially be able to provide for a large amount of the dining hall's needs. Many other universities such as Cornell have capitalized on this and with a large agricultural institution like Penn State there is a huge amount of opportunity for growth. Campus dining halls will have the opportunity to support local farming. Not only are they buying fresh ingredients to students, but they are promoting naturally grown vegetables to the local community. A union between the farm and the dining halls would be mutually beneficial.

Citations

- "Brown Market Shares Blog: How to Store Your Share 2." *Brown Market Shares Blog: How to Store Your Share 2*. N.p., n.d. Web. 16 Nov. 2014.
- "CNG - Produce Standards." *CNG - Produce Standards*. N.p., n.d. Web. 18 Nov. 2014.
- "Cornell University." *Dilmun Hill Student Farm*. Web. 4 Dec. 2014.
<<http://cuaes.cornell.edu/ag-operations/dilmun-hill/>>.
- FarmAid. (n.d.). Retrieved December 1, 2014.
<http://www.farmaid.org/site/c.qII5IhNVJsE/b.2723725>.
- "Organic Agriculture." *U.S. Department of Agriculture*. N.p., n.d. Web. 18 Nov. 2014.
- "Park Slope Food Coop." *Produce Price List : : Organic Food in Park Slope*. Web. 2 Dec. 2014.
<<http://www.foodcoop.com/go.php?id=90>>.
- "The Kitchen's Guide to Storing Fruits and Vegetables - Tip Roundup." *The Kitchen*. N.p., n.d. Web. 20 Nov. 2014.
- "Student-Run Farm A Possibility At Penn State." Web. 1 Dec. 2014.
<<http://onwardstate.com/2013/03/15/student-run-farm-a-possibility-at-penn-state/>>.
- "Student Farms Directory." *Student Farms Directory*. N.p., n.d. Web. 10 Nov. 2014.
- "US Organic Food Market Increases." *US Organic Food Market Increases*. N.d. Web. 15 Nov. 2014.
- "Vegetable Lasagna from Hunts." *The Realistic Nutritionist RSS*. Web. 2 Dec. 2014.
<<http://nutritionfor.us/2013/03/vegetable-lasagna-from-hunts/>>.