

Sustainability & Health

Lafayette Dining Services

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Alliance for Sustainable Communities–Lehigh Valley

Sustainability & Public Health Initiative

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This report is part of a series exploring sustainability and public health impacts of the food we eat. It grew out of the Alliance's Campus Sustainability Initiative (2007–2009), followed by internship projects exploring sustainable practices in healthcare and a research project on the health impacts of the industrial food system. The results made clear that food and food-service operations have a profound impact on public health.

The initial reports focused on the food-health connections and the overall impact of the thousands of meals served every day by institutional food-service operations at schools, colleges & universities, and hospitals in the Lehigh Valley. More recently, we have worked with students to look at sustainability and health impacts of their campus dining services:

- Impacts of Sustainable and Industrial Agriculture on Human Health (December 2009)
- Practices to Promote Community Health (May 2010)
- Healthy Food for Healthy Communities (May 2010)
- Sustainability in Businesses That Serve Food (August 2010)
- Dining Services at Lehigh (August 2010)
- Lafayette Dining Services (December 2010)

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For more information about the Sustainability & Public Health Initiative or about the Alliance's internship programs, contact Peter Crownfield at <peter@sustainlv.org>.



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Introduction

This report looks at Lafayette Dining Services and identifies changes needed to address sustainability and health concerns. It describes research that shows organic, homemade, and unprocessed foods are healthier and reduce the risk for various diseases; it also describes the proven health threats posed by industrialized foods. Finally, it outlines suggestions as to how Lafayette Dining Services can improve the campus food environment.

Before we discuss the need for changes, it should be stated that Lafayette Dining Services does provide some healthy choices and has taken steps to become more environmentally sustainable. Within the past decade, students have become increasingly aware of health and wellness and have demanded more fruits and vegetables. Unfortunately, students have not, until recently, demanded organic and sustainably-grown food, probably because they were unaware of the important health benefits. However, “lack of demand” does not mean such products should not be served— Dining Services provides food to a student body of active and intelligent leaders of tomorrow and needs to offer food that provides optimum nutrition and supports students’ long-term health, whether or not students demand such foods.

The best way to begin changing the food environment at Lafayette College is by revolutionizing the way we perceive Dining Services. Rather than serving restaurant-style food that is designed to appeal to students, but contains excessive salt, fat, and additives, the College should serve foods designed to be more like home-cooked meals. A growing body of research has established a clear relationship between restaurant food and health. In contrast, it is easier to reduce the amount of unhealthy ingredients and additives in a home-style meal; it is also easier to incorporate more organic foods. These important features of home-cooked meals are largely missing in college dining services.

In addition, the foods served by Dining Services are rarely organic or naturally-grown; they are further degraded by excessive processing and are packaged with excessive plastic, which has a very carbon-intensive production cycle. By offering organic and local meal options, Dining Services could make its offerings healthier while increasing the visibility and transparency of food preparation and origin—and reducing greenhouse gas (GHG) emissions. Most importantly, the purchasing power of Lafayette College can support local farming and help farmers shift to more organic and sustainable foods.

Lafayette Dining Services is operated under contract with Sodexo, an international, commercial food-service provider that tends to focus on sales and profitability. Dining Services should consider health first and sales later; it should *not* consider health and sustainability only when demanded.

Dining Services at Lafayette

If you walk into one of the “student restaurants”, it might appear that Dining Services offers a wide selection of healthy food choices such as fruits and vegetables, but the majority of the food is not organic or naturally-grown. To determine how ‘healthy’ a meal really is, it is essential consider the way food is grown and processed, because research clearly shows that conventionally-grown food from the industrial food system creates numerous health risks for students and in the communities where the food is grown.^{1,2}

Problems Associated with Conventional Farming and the Industrial Food System

Pesticides

Hundreds of pesticides are used in conventional farming practice. Although some company-sponsored studies assert that the concentration of these chemicals in food is low, other studies contradict these findings and show serious impacts on the environment and human health.^{3,4}

- The BBC reported a study that found pesticides levels in produce vary from item to item, making these concentrations difficult to test with any given sample.⁵
- One study used urine samples to compare the concentration of pesticides ingested by participants on an organic diet versus a diet of conventional foods. Eating a conventional diet yielded high levels of pesticides in the body; after switching to an organic diet, pesticide concentrations were significantly lower.⁶
- Research at John’s Hopkins indicates that asthma may not only arise through pollutants in the air, but also through ingestion of pesticide-laden foods.⁷
- Research shows that commonly-used organophosphate pesticides can cause reproductive problems and developmental changes that can last for multiple generations.⁸

Antibiotics and Hormones

The extensive use of antibiotics and hormones to promote growth in animals creates serious threats to human health, including the following:

- Widespread use of antibiotics in food production creates antibiotic-resistant pathogens that threaten human populations.⁹
- Outbreaks of mad cow disease in Britain in the 1990s motivated the European Union to ban four antibiotics for livestock production. Canada’s health department has also called for the reduced use of antibiotics for animal growth.¹⁰
- The World Health Organization has reported “clear evidence of the human health consequences due to resistant organisms resulting from non-human usage of antimicrobials.”^{11,12} Some strains of human pathogens, including *Enterococcus faecalis*, *Mycobacterium Tuberculosis*, and *Pseudomonas* are now resistant to over 100 drugs.¹³
- To increase milk production, cows are often injected with recombinant bovine growth hormone (rBGH), also known as recombinant Bovine Somatotrophin (rBST). Not only is there a 50% increase in lameness and a 25% increase in frequency of udder infections, studies show that cows treated with rBGH have increased levels of insulin-like growth factor-1 (IGF-1), an important factor in the growth of breast, prostate, and colon cancers.¹⁴ The health threat posed by rBGH is so serious that European nations and Canada have banned its use in dairy products, yet many of the dairy products served to students are produced using rBGH.

Dining Services should eliminate all meat and dairy produced using antibiotics, rBGH, or other hormones.

High-fructose Corn Syrup

Although there is a selection of “healthy” meal choices available in both retail and buffet-style student “restaurants”, there should be concern over products containing high-fructose corn syrup. High-fructose corn syrup can be found in everything from bread to soft drinks, used as a cheap alternative to conventional sugar.

Yogurt, granola bars, muffins, cereals, jams, candies, and soft drinks all contain high-fructose corn syrup and are sold in almost every food service location. At the food court, I randomly selected three retail breakfast bars and examined their ingredients; all three had high-fructose corn syrup. Only two items—regular flavor pop chips and Kozy Shack rice pudding—had fewer than seven ingredients.

Here are a few of the health concerns associated with high-fructose corn syrup:

- Consumption of high-fructose corn syrup is related to increased levels of LDL cholesterol and may increase the risk for heart disease and diabetes to an even greater extent than glucose or fructose.¹⁵
- Because our bodies metabolize high-fructose corn syrup differently than regular sugar, it may put those who consume it at an increased risk for obesity.¹⁵

- Even foods labeled as natural should be questioned: the term “natural” as some food items are labeled has no significance or regulation; any food product can label its ingredients as “natural”, even if the product contains additives such as high-fructose corn syrup.¹⁶

Lafayette College has a contract with Coca-Cola: in exchange for selling Coca-Cola products, Lafayette receives a financial contribution from the Coca-Cola Company. Coca-Cola products not only contain high-fructose corn syrup, they contain excessive amounts of sugar and caffeine while offering almost no nutritional value. One could say that endorsing Coca-Cola products is similar to endorsing cigarettes—both are legal, yet both cause serious health problems in the long-term.

Dining Services should phase out all food products containing high-fructose corn syrup.

Processed Foods

Aside from high-fructose corn syrup, most processed foods contain many additives, preservatives, and excess salt, all of which are known to increase the risk of obesity and other health problems.

- Consumption of whole (non-processed) foods reduces the risk of depression by 26%.¹⁷
- Reduction of sodium in processed foods could save approximately 513,885 Americans from fatal strokes and another 480,358 Americans from heart attacks.¹⁸
- A seven year study found that people who ate most processed meats had a 67% increased risk of pancreatic cancer.¹⁹

Dining Services should reduce the use of processed foods and prepare more food from scratch, using only appropriate, healthy amounts of sugar, salt, and fat.

Other Sustainability Concerns

Biodegradable plant-starch utensils decrease the school’s carbon footprint only if they are composted, but Lafayette does not compost these utensils. The carbon emissions from production and transportation may be even more than from conventional plastic utensils and are certainly more than from reusable serviceware. In addition, we have no information as to whether or not these utensils are made with GMO plants, which would create additional risks.

Currently, Dining Services spends approximately three times more for “biodegradable” serviceware—most of which are then thrown in the trash. Lafayette should invest in reusable serviceware, including reusable take-out containers, and teach students to reuse more than they dispose. The savings from eliminating single-use products should be allocated to the purchase of organic & naturally-grown foods.

Health Benefits of Organic, Naturally-Grown Foods

The negative effects of conventionally grown produce are alarming, but the benefits of organic produce are clear. Numerous studies prove that organic fruits and vegetables offer many advantages over conventionally-grown foods:

- Increased amounts of beneficial vitamins, minerals, essential fatty acids, and antioxidants,²⁰ which have been associated with a reduced incidence of coronary heart disease and some cancers.
- Lowered risk for incidence of common conditions such as cancer, coronary heart disease, allergies and hyperactivity in children.²¹
- No genetically modified organisms (GMO). There have been few reliable studies of the health effects of GMO in food, and some of these are questionable: over half were done fully or partially in collaboration with companies with a vested interest. While these company-sponsored studies found no negative effects, independent studies found evidence of harmful effects that require much more research.²²

- Grass-fed cattle produce meat lower in fat than industrially-raised beef and with higher levels of omega-3 fatty acids. In addition, grass-fed beef can benefit the cardiovascular system, enhance brain function, and may help prevent cancer.²³
- Instead of producing significant greenhouse gas (GHG) emissions, organic practices produce very low emissions and actually sequester significant amounts of carbon in the soil.²⁴

Dining services should develop a plan to transition to organic or naturally-raised food as quickly as possible. Meat and poultry should be pastured (fed grass, not grain), and Dining Services should explore ways to reduce the amount of meat consumed by students.

Steps in the Right Direction

It should be noted that Dining Services has already taken several steps to become more sustainable:

- Helped complete the college's sustainable food loop by serving vegetables grown at the student organic garden;
- Assisted the composting program by pulping and dehydrating food waste in the buffet-style "student restaurants";
- Replaced Styrofoam serviceware with compostable single-use items (although these also have drawbacks);
- Increased the selection of nutritionally-balanced meals. For example, the "well-balanced plate" entree provides a balanced portion of vegetables, protein, and carbohydrates;
- Changed to Fair Trade coffee in the student restaurants"; the 3 "retail" locations offer at least one Fair Trade coffee; and
- Added vegetarian and vegan meal options at the "student restaurants".

Social Responsibility

As an institution of higher learning, Lafayette College has a responsibility to preserve and support the health of its students and the local community and to use responsible purchasing practices to ensure that Lafayette's purchases support the health and well-being of those who produce the food and the communities where they work. [For food and other products that are produced elsewhere, Fair Trade supports these goals. Fair Trade certification currently applies to coffee, tea, cocoa & chocolate, sugar, rice, vanilla, bananas, and a few other items.]

As shown in the previous sections, the foods currently served by Dining Services actually increase students' risk of many health problems. The declining health of America's young adult population makes these concerns especially important. During the past two decades, a significant increase in obesity, diabetes, hypertension, and dyslipidemia (high levels of lipids and/or cholesterol) has occurred among people in their teens and twenties.²⁵

- A recent study shows 37% of obese boys and 51% of obese girls become severely obese adults. The same study found that less than 5% of young adults who were at a normal weight as teens became severely

obese as young adults, thus it is critical to prevent obesity beginning in childhood and young adulthood.²⁶

Recent research from the University of New Hampshire²⁷ has also scrutinized the college food environment:

- Out of 800 students between the ages of 18 to 24, 95 percent of women and 80 percent of men did not meet the nutritionally recommended standards for daily intake of fiber, and only 33 percent of students met the daily recommendation for calcium.
- Metabolic syndrome, a cluster of five risk factors (high blood pressure, excess abdominal fat, high blood glucose, high triglycerides, and low HDL or “good” cholesterol) that are predictive of future development of heart disease and diabetes, is particularly prevalent in males. 66% of males (and 50% of females) had at least one risk for metabolic syndrome, and eight percent of males had metabolic syndrome.

Currently, Lafayette College contracts with Sodexo to operate its Dining Services. According to the message provided on their website, Sodexo has developed a “Better Tomorrow Plan”, instituted to increase sustainability initiatives and social responsibility. The core aspects of the “Better Tomorrow Plan” include protecting and restoring the environment, supporting local community development, and promoting health and wellness. More specifically, this plan urges Sodexo accounts to achieve 14 commitments to a brighter future; although a few of these commitments have been successfully implemented, many have not. For example, let’s look at just one area, local purchasing: Commitment #5 says, “We will source local, seasonal or sustainably-grown and raised products”; Commitment #13 says, “We will support local community development.”

Lafayette Dining Services purchases most of its produce from farms outside of the Lehigh Valley. Sodexo’s definition of ‘local’ encompasses a radius of 150–250 miles, so Dining Services sources ‘local’ produce from throughout the Mid-Atlantic region. To purchase beets from Massachusetts and label this as local is deceptive advertising. In addition, most of this food is not sustainably-grown and is contracted through large produce distributors. Thus, the environmental, health, and economic benefits of purchasing locally are never realized.

Dining Service should continue to phase out all un-Fair Trade products and ingredients and set standards for responsible purchasing to ensure that food production is sustainable. To support a stronger local economy, the College should require Dining Services to purchase from local farms whenever possible and work with local farmers to increase the supply of organic and naturally-grown foods.

A Plan for Change

As part of our research on dining services, I visited Rodale, Inc, an Emmaus-based company whose mission is to promote health and wellness; I gained some insights on what the Lafayette student body, faculty, and administration can do improve the state of dining services on campus. It is clear that there are short and long-term goals that the college should strive to achieve:

Short-term Goals

These goals can be implemented within the next six months to a year. Based on the insight gained through my research, including visits to other campuses and to Rodale, I know that these goals can be attained with support from students and the administration, which has a responsibility to its students to make these goals into a reality.

Insist on Organic and Naturally-Grown Local Foods

Dining Services should demonstrate true concern for the environment and students’ health by demonstrating that they understand the impact of their purchases, even if change is not demanded by a majority of students—a mother would not stop serving vegetables simply because her children did not request them. Dining Services

should take the lead in making sure students are better informed about the importance of organic and naturally-grown food and actively promote healthy, sustainable eating.

- Parkhurst Dining Services at Delaware Valley College began serving vegetables grown by the school's agriculture majors—they did not wait for students to ask, but knew it was the right thing to do.
- When the student body of Cedar Crest College requested fresher and higher quality salad dressings, Cedar Crest Dining Services (also a Parkhurst account) began preparing all salad dressings from scratch.
- The students at Muhlenberg (a Sodexo account) encouraged dining services to market farms as “local” only if they are within fifty miles of the school, as opposed to Sodexo’s limit of 150–250 miles. Unfortunately, the farms that supply Muhlenberg (and Lafayette) are not organic farms.

Although student demand is important for motivating healthy and sustainable changes, what is right is not always the most popular.

Lafayette should require Dining Services to purchase and serve organic, naturally-grown, local foods and reduce the number and quantity of unhealthy, unsustainable choices. By making this part of the contract, the Lafayette administration can ensure that the College serves food that supports student health.

Develop Incentives for Healthy Eating

Rodale Dining Services instituted several creative incentives to promote healthy eating among its employees, and similar methods could be easily created at Lafayette. Rodale uses a “points” system: the healthier the food item, the more points an employee receives. After a certain number of points have been accumulated, employees can cash them in for free gifts or food. This would be a great way to increase both purchases and awareness of healthy and sustainable foods.

There are other potential rewards for promoting healthy eating: Leah Nichols, director of Rodale Dining Services, reported that since implementing their “points” program, Rodale employees use less sick days, creating a financial benefit that helps offset the higher cost of the food. Similar benefits might be reaped at Lafayette; healthier students miss class less often, may earn higher grades, and may perform better both during college and after graduation.

Develop a Plan to Bring Dining Services ‘In-House’

An in-house dining service would make it easier for the College to set policies for food purchasing and preparation. An in-house dining service can purchase and promote local and organic food without conflicting with policies created by a food-service provider to increase its profits. In addition, an in-house operation would allow changes to be implemented in a more timely manner, because the College would have full control over purchases.

Thorough planning is essential, but Lafayette has the resources needed to do this successfully. Students could explore and analyze the health, environmental, economic, and other impacts of converting to an in-house dining service and develop a business plan to recommend to the administration. This could be done as an interdisciplinary course or tech clinic, working with faculty members from departments such as Biology, Economics, Environmental Studies, Geology, and with the Sustainability Committee.

Longer-Term Goals

Several goals should be planned and implemented over the long-term to ensure that healthy and sustainable food becomes a permanent part of the Lafayette experience and that Lafayette Dining Services lives up to the College’s goals of being a vital part of the community.

Educational Eating

Besides incentives that promote healthy eating on a short-term basis, students should have the knowledge they need to eat sustainably for the rest of their lives. Students should learn about the impact of their food choices on both their bodies and the ecosystem. (It is great that Dining Services has begun to post some basic nutrition facts in student “restaurants”, but students know little about the health impacts of food and how it is produced.)

The College should host seminars for incoming students as part of their orientation, so first-year students will be able to make good decisions about eating for health and sustainability. Lafayette should consider hiring or contracting with a nutritionist to develop educational materials, answer questions, host brown bags, and work with chefs to ensure that meals provide optimum nutritional benefits. With some education, students can become more involved in planning meals and more motivated to eat ‘home-cooked’ meals.

Make a Commitment to Local Food

By giving preference to local, sustainably-grown products, Lafayette can improve its food supply while providing a powerful incentive for local farmers to supply such products. While some efforts can start immediately, as noted above, this is included as a longer-term goal because there are several barriers to purchasing sustainably-produced local food, including the following:

- Lack of supply – Every day, Lafayette requires more food than any of our local farms could provide—and much of what they currently supply is not organic or naturally-grown.
- Insurance requirements – The extremely-high minimum insurance required for farms that supply Sodexo is a significant barrier for local farmers, most of whom are small business owners.
- Efficient ordering system – Having to contact many small farms would increase Dining Services costs.

Fortunately, there is a relatively simple way to overcome these barriers: Lafayette could work with community organizations and farmers to help form a co-op—a commercial enterprise jointly owned by the participating farmers. Such a co-op could provide the needed marketing and order-filling capacity and could obtain needed insurance at a reasonable cost. Lafayette’s consistent high demand would create a powerful incentive for farmers to work together and to move from conventional to organic farming methods. (And the process of forming and operating a co-op would be a valuable educational experience for students!)

Conclusion

Much of the food served by Lafayette College is produced unsustainably and does not support student health. This is demonstrated by a litany of research scrutinizing processed foods and conventionally-grown foods compared to organic and naturally-grown foods. Natural foods offer more vitamins and minerals than nonorganic foods and come without the burden of toxic chemicals; they thus support health instead of undermining it.

It is critical that we begin changing the foods served in Lafayette dining facilities, including a change in approach—there must be shift from trying to be like “restaurants” to being more like home kitchens. This change can be implemented through student and administrative initiatives, and also by thoroughly examining the costs and benefits of an in-house dining service. Most importantly, once this change is complete, the food environment at Lafayette College will not only benefit the health of students, but also benefit the local economy and environment.

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