

Meatless Mondays at NJIT: A Proposal

August 8, 2013

Grant Coordinator

The Lawrence Foundation

530 Wilshire Blvd., Suite 207

Santa Monica, CA 90401

Applicant

The New Jersey Institute of Technology

323 Martin Luther King Jr. Blvd

Newark, NJ 07102

Contact Person

Danielle German

Dg278@njit.edu

Executive Summary

Meatless Mondays is a concept that advocates adopting a vegetarian diet on Mondays. A vegetarian diet, which abstains from meat, poultry, and fish, benefits a person's health and the environment. Although Meatless Mondays is a new concept, it is growing in popularity. Many organizations have implemented Meatless Mondays, including Duke University, the LA County Public Schools, Sodexo food services, The John's Hopkins Hospital, and many more. This proposal seeks to prove that The New Jersey Institute of Technology (NJIT) is in a perfect position to teach students and the community about healthy, affordable, meat-free meals. We have developed five phases, requiring a total of six weeks, to implement the Meatless Monday program. We require the financial support of The Lawrence Foundation to fully realize the potential of this healthy, sustainable program. First, we will demonstrate how Meatless Mondays can help reduce incidence of disease, will reduce environmental stressors, and will show students and the community healthier meal options. Second, we will give a few details about NJIT how adopting Meatless Mondays furthers our goals of extending excellence to students and the community. Finally, we will outline a six-week plan and budget for implementing a fully vegetarian Monday menu on the NJIT campus.

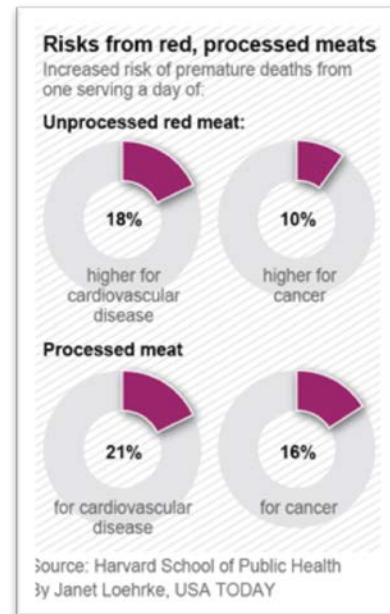
Background

The health of the nation is at an all-time low. Cancer, diabetes, and heart disease are some of the leading causes of death in the United States. The American Cancer Society predicts that cancer will cause the deaths of 580,350 Americans in 2013. In 2011, the American Dietetic Association released the rates of diabetes for adults and children in the US. They found that 25.8 million children and adults have

diabetes, with 79 million people in a pre-diabetic state. There is much cause for concern as the amount of children developing type 2 diabetes grows every year. In 2007, diabetes contributed to 231,404 deaths. In addition to these rates, the Center for Disease Control (CDC) states that 600,000 people die of heart disease in the US every year. That adds up to one out of every four deaths caused by heart disease. Many of these deaths are preventable by simple changes in diet and lifestyle. Research increasingly shows that factory farmed meat, which is high in antibiotics and hormones, has a disastrous effect on the body. There is a national push for using whole fruits and vegetables as well as staying away from meat and processed foods. By adopting a vegetarian diet that focuses on whole, healthy foods, a person can significantly reduce these health risk factors.

According to the American Dietetic Association, vegetarians have lower cancer rates than meat-eaters. The Adventist Health Study, which explores the connections between lifestyle, diet, and disease in the long-term, found that people who consumed meat had a 54% increased risk for prostate cancer and an 88% increased risk for colorectal cancer, even when controlling for age, sex and smoking.

Diabetes is a growing problem in the United States. According to the American Dietetic Association, vegetarians are at much lower risk for developing type 2 diabetes. The Adventist Health Study found that this lower risk factor for vegetarians might be due to an average lower BMI and higher fiber intake than those who consume meat. Specifically, this study found that men who consume animal flesh are at 80% higher risk for developing diabetes than those who follow a vegetable-based diet.



Heart disease is one of the biggest killers in America. According to the CDC, every year, the US spends \$108.9 billion on health care services, medication, and lost productivity due to coronary artery disease. One of the leading causes of heart disease is meat consumption. Increasingly, studies have shown that red meat in particular contributes to heart disease, but only by a small margin. All animal flesh is shown to be bad for the body. In a recent article published by *The New York Times*, one study found that red meat consumption releases a chemical that is burped out by bacteria when the meat is broken down in the intestines. This bacterium is found to cause heart disease in mice, and studies have found that vegetarians and vegans do not make the bacteria nearly as much as those who eat meat. On average, vegetarians are at lower risk for heart disease, and vegans have cholesterol that is more than 40 points lower than meat-eaters (Key, Fraser).

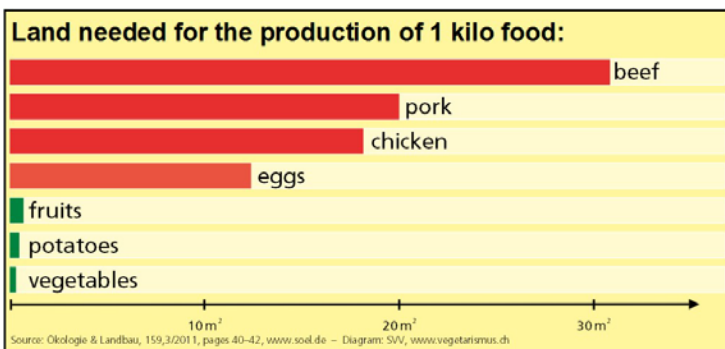
Obesity is a huge problem in the United States. It is becoming the leading cause of preventable deaths and is related to the high incidence of heart disease, cancer, and diabetes. An HBO documentary series, *The Weight of the Nation*, used statistics from the nation's top health organizations to report some startling facts:

- 68.8% of adults are overweight or obese
- Obesity is a contributing factor in 5 of the 10 top killers in America
- Health care costs related to obesity are expected to exceed \$300 billion by 2018

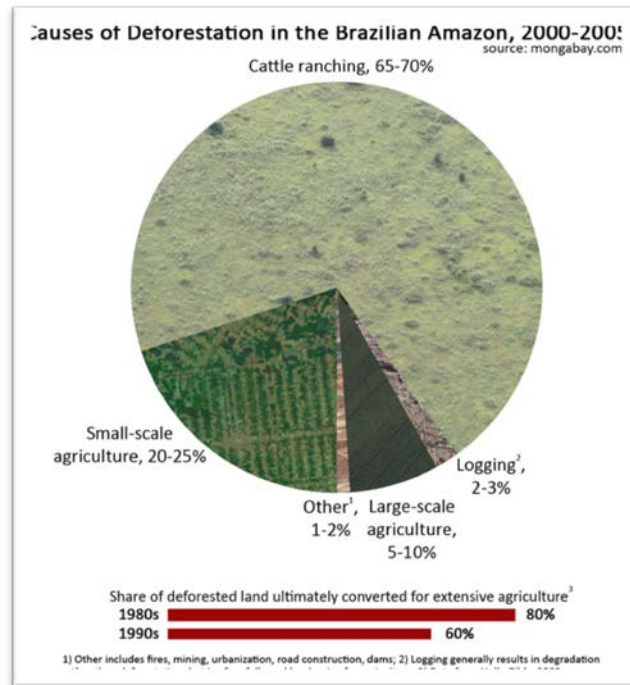
In addition to these statistics, obese workers are promoted less often than peers of a healthy weight. John Cawley, a health economist at Cornell University, found that obese women are promoted 11% less often than their peers. Studies show that, on average, vegetarians weigh less than meat-eaters. The National Institute of Health reported that vegetarians and vegans weigh 3-20% less than those who consume animal flesh.

In addition to health reasons, there are numerous reasons to go vegetarian to help save the environment. Most people do not think about the land and energy resources that go into factory farming. Factory farming is the practice of keeping large amounts of animals in small areas for the purpose of human consumption. According to the United Nations, factory farming is the number one factor creating greenhouse gas emissions. Raising animals for food produces more greenhouse gasses than all forms of transportation combined. A research study at the University of Chicago found that every vegan prevents 1.5 tons of CO2 emissions every year.

The fact is that factory farming is not sustainable. The amount of land devoted to factory farms, food and water that goes to the livestock on those farms, and energy that goes into providing food, water, and transportation to the local grocery store is a complete waste of resources.



Choosing to eat meat is an extremely wasteful food choice. Estimates of how much water required to produce 1 kilo of beef vary between 13,000 liters to 100,000 liters. No matter what the number, it is more than the 1,000 to 2,000 liters required to produce a kilo of wheat. In the US, 70% of grown grain is fed to farmed animals; a whopping 30% of the Earth's land mass is used towards feeding and keeping farmed animals.



The United Nations released a report speculating that animal farming is a leading cause of species extinction. South American forests are being cut down to make room for crops to feed factory farmed animals. The destruction of the forests is also destroying animal's natural habitats, leading to extinction. Switching to a vegetable-based diet will help save some of these animals by reducing the demand. With less demand, more animals are left to live in their natural forest habitats.

All of this information compellingly argues for a vegetarian diet. Implementing Meatless Mondays at NJIT will give students and community partners a chance to learn all of these facts while eating whole, healthy foods. The New Jersey Institute of Technology is a university in Newark, NJ, that is committed to the pursuit of excellence. NJIT strives to prepare undergraduate, graduate, and continuing professional education students for productive careers and to amplify their potential for lifelong personal and professional growth. We are committed to conducting research with an emphasis on applied, interdisciplinary efforts. We pay special service to both our urban environment and the broader society of the city, state, nation and global community by conducting public policy studies, making educational opportunities widely available, and initiating community-building projects. NJIT also seeks to contribute to economic development through the state's largest business incubator system, workforce development, joint ventures with government and the business community, and development of intellectual property. The university is also familiar with grants; nineteen students and faculty have received the prestigious National Science Foundation Early Career Development (CAREER) grant, which is awarded to outstanding teacher-scholars who successfully integrate education and research.

NJIT does not only contribute to New Jersey's education and workforce. NJIT campus dining services are committed to sustainability, nutrition, and outreach education. We believe the word "sustainability" encompasses our overarching goals of building community on campus with consideration towards students, the environment, farmers, and all of NJIT's partners who help us achieve our sustainable goals. Campus dining services fosters a wholesome environment where the communities we serve can feel good

about how we eat. We do this in building our local food network, designing and building Gourmet Campus Gardens, and through educational marketing, outreach and workshops with students. Part of the campus dining mission is to build a healthy foundation in nutrition knowledge, increase awareness of health issues, and expand the palate while improving food choices. Our dining initiative also partners to find on-site composting solutions, build edible community gardens, and connect with each department on campus to create custom catered events for various student groups, Athletics, Admissions, and Student Life.

Objectives

The objectives of adopting a Meatless Monday program on the NJIT campus include teaching students and community partners:

- Healthy eating habits
- The benefits of adopting a vegetarian diet for health and for the environment
- Affordable, healthy recipes
- That cruelty-free foods can taste great

Plan of Action

We have determined a five-phase plan for implementing Meatless Mondays. This plan will take the Monday menu from an omnivorous state to one with completely plant-based meals. We will focus on lunch and dinner meals because they are the most meat-heavy meals of the day. We plan on phasing out meat at breakfast time, but unlike lunch and dinner, we do not plan to offer meat substitutes. The five phases of implementation are:

1. Provide more meat-free meals in addition to non-vegetarian meals
2. Phase out meals with meat within four weeks
3. Inform students and community partners that plant-based diets are better for health and for the environment
4. Survey students about Meatless Mondays to determine their knowledge of the program and their food preferences
5. Adjust the menu and educational elements accordingly

The first, second, and third phases will occur simultaneously. During the four weeks that we will be working towards eliminating meat products, we will be increasing vegetable-based meal options and flooding the dining halls with information about Meatless Mondays and the benefits of a vegetarian diet. The Meatless Monday website, www.meatlessmonday.com, has a wealth of promotional materials and informational pamphlets. We plan to use these to educate the students and spread the word about Meatless Mondays.

Key Personnel

The key personnel are the people responsible for planning the menus at NJIT. Mainly, this includes the administrators at campus dining services and at the university offices.

Budget

The advantage of Meatless Mondays is that most of the budget is already constructed. The facilities, labor, and management portions of the budget are built-in. The only aspect to be examined is the cost differences between meat-based meals and plant-based meals. According to the Bureau of Labor Statistics, here is the average cost of some meat products versus plant-based proteins (per pound):

- Ground beef \$3.82
- Bacon \$4.91
- Chicken breast (boneless) \$3.53
- Beans \$1.40
- Peanut Butter \$2.71

And also some common meat alternative products (per four patties):

- Dr. Praeger's Veggie Burgers \$4.99
- Dr. Praeger's Buffalo Chickenless Patties \$5.29

However, none of these ingredients makes a meal on its own. When offering only vegetarian meals, the costs will depend on the types of foods offered. The best, healthful vegetarian foods are whole foods that will cost less than factory farmed meats. These foods include beans, oatmeal, nut butters, fruits and vegetables. There is more cost associated with foods that are plant-based meat alternatives, such as veggie burgers, veggie hot dogs, meatless balls, or meatless chicken. The benefits of these types of foods are that they appeal to more students and encourage them to learn more about meatless diets. The cons with these foods are that, while generally healthier than factory farmed meat, they can be high in sodium and are not as healthy as whole foods.

Here is a breakdown of the costs for meat-based proteins and for plant-based proteins, the total cost per protein when serving 1500 students, and the cost difference between meat protein and vegetarian protein.

Product (Protein Only)	Cost	Cost Per Protein at 1500 Servings	Cost Difference
Beef Burger	\$3.82 / pound	\$1,432.50	
Veggie Burger	\$4.99 / four	\$1,871.25	
			-\$438.45
Beef Tacos	\$3.82 / pound	\$1,432.50	
Bean Tacos	\$1.40 / pound	\$525	
			+\$798.75
Chicken Sandwich	\$3.53 / pound	\$1,323.75	
Buffalo Chickenless Patties	\$5.25 / four	\$1,968.75	
			-\$645
Average Meat Cost		\$1,396.25	
Average Meat Alternative Cost		\$1,455	
Average Cost Difference			\$58.75 more for meat alternatives

It costs \$58.75 more for the average vegetarian meal at 1500 servings. At two meals a day for sixteen Mondays per semester, the cost of meals with meat alternatives averages out to **\$1,880 more per semester**.

An average campus lunch costs the school \$4; an average campus dinner costs the school \$5.50. These totals factor in the cost of food, labor, and overhead. When serving 1500 students for sixteen Mondays, the total semester cost of lunch is \$96,000 and dinner costs \$132,000.

The total cost of lunch and dinner for every Monday in one semester is \$228,000.

The total cost of meatless lunch and meatless dinner for every Monday in one semester is \$229,880.

We would also like to introduce a campus garden. We would offer the opportunity to work on the campus garden to all student volunteers. The campus garden will be grown from seeds and plants donated to the university. We plan to hold educational instruction on gardening and nutrition at the garden, taught by university and community volunteers.

Implementation Timeline

September 9—Begin Phases 1, 2, and 3

- Offer more vegetarian meal options
- Phase out meat-based meals
- Provide education on the benefits of vegetable based meals

October 7—Complete Phase 2

- No more meat is offered on Mondays in campus dining

October 14 through 21—Phase 3

- Survey students on vegetarian meal options and knowledge

October 28—Phase 4

- Adjust menu to the likes and dislikes of the student population; offer more education if it is required

Conclusion

Adopting Meatless Mondays on the NJIT campus is feasible and crucial to the health of students and the environment. College is a time for students to learn and make changes that will affect them for the rest of their lives. NJIT can provide a lasting impression on students' health and improve their environmental footprint by showing them the benefits of a vegetable-based diet. Meatless Mondays are better for the earth and will create healthier students and a healthier workforce. It will also demonstrate nutritious, sustainable food options to the Newark community. These options can include whole foods that are cost effective such as beans and oatmeal or more costly but popular meatless products. The total average cost

of replacing meat with meat alternatives for two meals every Monday for one semester is \$1,880 more. The benefits of having a healthy society and sustainable foods far outweigh the momentary costs. With Meatless Mondays we can move towards a stronger, more vital culture.

To learn more about Meatless Mondays, please visit www.meatlessmonday.com. This website has a wide range of promotional materials and interesting facts about the habits of campus diners. To learn more about vegetarianism and how it affects animals, health, and the environment, please visit the Mercy for Animals website, www.mercyforanimals.org. Mercy for Animals is an excellent organization devoted to helping animals and destroying the practice of factory farming.

Thank you so much for considering NJIT's proposal for implementing a Meatless Monday. If you have any questions or suggestions, please do not hesitate to contact us. You can reach Danielle German at any time at dg278@njit.edu.

Works Cited and Consulted

American Dietetic Association. (2003). Position paper on vegetarian diets. J Am Diet Assoc. 103:748-765.http://www.vrg.org/nutrition/2003_ADA_position_paper.pdf

<http://greeninches.com/images/2011/01/meatless-monday-chicken-pig-cow.gif>

<http://i.usatoday.net/life/graphics/2012/0313-red-meat-health/red-meat-risk.gif>

<http://www.cdc.gov/heartdisease/facts.htm>

<http://www.chooseveg.com/environment>

<http://www.chooseveg.com/health>

<http://www.diabetes.org/diabetes-basics/diabetes-statistics/>

<http://www.downtoearth.org/environment/top-10-reasons>

<http://www.mongabay.com/images/rainforests/deforestation-in-the-amazon.jpg>

<http://www.pbs.org/newshour/rundown/2012/05/obesity-in-america-by-the-numbers-1.html>

http://www.vegetarismus.ch/info/bilder_oeko/landuse_en.jpg

Key TJ, Fraser GE, et al. (1999, Sep.). Mortality in vegetarians and nonvegetarians: detailed findings from a collaborative analysis of 5 prospective studies. Am J Clin Nutr, 70:516S-524S.

Kolata, Gina. (2013). Culprit in heart disease goes beyond meat's fat. The New York Times.
<http://www.nytimes.com/2013/04/08/health/study-points-to-new-culprit-in-heart-disease.html?pagewanted=all&r=0>

NewScientist.com, "It's Better to Green Your Diet Than Your Car," 17 Dec. 2005.
<http://www.newscientist.com/article/mg18825304.800-its-better-to-green-your-diet-than-your-car.html>

Norris, J. (2003, March). Making Sense of Nutritional Research.

Robert A. Valenti, M.A.S.; Assistant Vice President for Administration, Office of University Campus Services, Fairleigh Dickenson University

"Rearing Cattle Produces More Greenhouse Gases Than Driving Cars, UN Report Warns,"

UN News Centre, 29 Nov. 2006.
<http://www.un.org/apps/news/story.asp?newsID=20772&CR1=warning>