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Undergraduate

Why Animal Agriculture is Unsustainable

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Abstract

Animal agriculture causes many unsustainable, destructive problems to individuals, the environment, and the economy. The amount of destruction that animal agriculture does to the planet, to environments and to species is devastating as animal agriculture is the root problem for the world's increasing temperatures, species extinction, deforestation, and water quality. These issues should come to light when the University of California, Merced talks about its 2020 Project; however, these problems have been neglected and thus, by supporting a plant-based diet, the University can model a sustainable environment, healthy faculty and students — free from high levels of stress, anxiety, and disease, caused by unhealthy food options — and the ultimate “triple zero”. In addition to supplying more food options, the University could advocate for vegan clubs and demonstrate the unsustainability of animal agriculture. As the University shifts to offering more plant-based food, the overall health, wellbeing, and productivity of students and faculty will increase.

Key Terms

Animal agriculture, Sustainable, Unsustainable, 2020 Project, Veganism, Plant-based diet

Why Animal Agriculture is Unsustainable

Animal agriculture causes many unsustainable, destructive problems on individuals, the environment, and the economy. These problems stem from animal agriculture on a broad scale and on a small scale – globally and at the University of California, Merced. Globally, animal agriculture causes deforestation, species extinction, drought, disease, ocean dead zones, greenhouse gas emissions — more than all transportation combined — water and air pollution, and global warming (DiCaprio, 2016). Because the University of California, Merced has pledged to consume zero net energy, produce zero waste, and zero net greenhouse gas emissions — referred to as “triple zero” — these issues should come to light when the University of California, Merced talks about their 2020 Project (Triple Zero Commitment, n.d.). However, these problems have been

neglected and thus, by supporting a plant-based diet, the University can model a sustainable environment, healthy faculty and students — free from high levels of stress, anxiety, and disease, caused by unhealthy food options — and the ultimate “triple zero”. Not offering healthier food causes busy students and faculty to either choose unhealthy food, that affects them physically and mentally, or skip eating; thus, leaving them with distorted eating.

Students that are healthy both mentally and physically can put their full effort in their studies, as the type of food that students eat directly relates to their ability to produce their highest quality of work. Previous studies demonstrate how plant-based diets can lower stress, anxiety, and depression levels (Beezhold et al, 2015). Unfortunately, with the type of food offered in the cafeterias at the University, many students find themselves trapped in a spiraling downfall – mentally and physically – that leads to the inability to stay focused, increased stress and anxiety, and may lead to life threatening diseases and disorders, such as eating disorders.

According to many nutritionists, diets lacking a significant amount of fruits and vegetables cause short-term effects including a lack of energy and focus and long-term effects including increased risks of cardiovascular disease, osteoporosis, cancer, and many other ailments (Buxton, 2014). If students were able to eat a more plant-based diet (vegan) – a diet free from meat, dairy, eggs, and any other animal by-products such as honey and gelatin – and had access to a surplus of fruits, vegetables, whole grains, and legumes, then many of these problems could become extinct (Lederman & Pulde, 2016). If a vegan diet can show physical and mental health improvement in individuals at the university level, then eating disorders, stress, and anxiety – along with many other ailments – could potentially be reduced.

Review of Literature

Environmental and Economical Effects

The amount of destruction that animal agriculture does to the planet, to environments and to species is devastating, as animal agriculture is the root problem for the world's increasing temperatures, species extinction, deforestation, and water quality. As many previous studies have shown, animal agriculture drains the earth of major resources (DiCaprio, 2016, Fiut, 2016, & World Watch Magazine, 2004). Animal agriculture enables the destruction of rainforests, ocean dead-zones, drought, production of greenhouse gases, and the “murder” of over six million animals every hour (DiCaprio, 2015).

An abundance of research supports the idea that animal agriculture — industrial

and free-range — is unsustainable. While free-range farming is considered “better” than industrial farming it still causes many environmental, personal, and economical destructions (Appleby, 2005). Farmers have forgotten that the methods of production determine the final value of their products; as results show that industrial farming increases the amount of food and money wasted, deforestation, greenhouse gas emissions, air and water pollution, species extinction, disease and poor food quality (Fiut, 2016). In the United States alone, animals raised for food excrete 7 million pounds of waste every minute. This waste gets dumped into rivers and toxins are released into the air, destroying water and air purity. The drought in California is greatly due to the amount of water used by animal agriculture, because the animal agriculture industry uses 34 trillion gallons of water and 660 gallons to produce a single hamburger (DiCaprio, 2016). The amounts of greenhouse gas emissions produced, by feces, pesticides, and fertilizers, is more than all means of transportation, combined (Fuit, 2016). As more space is needed for the farming of these animals, rainforests are cut down, and species habitats are destroyed; thus, killing off the populations (Fiut, 2016, DiCaprio, 2016, & World Watch Magazine, 2016). Because of the “efficient” way cattle, pigs, and chickens are slaughtered, food quality has declined, and even though 70 billion animals are slaughtered for food a year, 340.6 million never make it to the shelves of the grocery store. (DiCaprio, 2016 & Fuit, 2016).

If slaughter houses had glass walls, everyone would be vegetarian.

—Paul McCartney, *Glass Walls*, 2009
An experiment, evaluating individuals' grocery habits after being shown the origin of the meat, shows that individuals will opt out of buying meat, when reminded that the meat once was a living, breathing creature (Hoogland, 2005). Despite this previous research, animal agriculture is continuously praised for providing income to farmers; even though beautiful creatures are sacrificed by the thousands, and individuals suffer the consequences of consuming animals.

Personal Effects

Previous research shows that omnivorous diets cause individuals to be increasingly susceptible to a variety of chronic diseases (DiCaprio, 2015). College students with unbalanced diets, lacking a sufficient amount of fruits and vegetables, face short-term and long-term effects. Short-term effects include decreased energy and focus, while long-term effects include risk of cardiovascular disease, osteoporosis and cancer. Students that are unable to plan meals, snack frequently, and lack time and money, find themselves eating an abundance of processed foods (Beezhold et al., 2015 & Buxton, 2014). A healthy diet enables students to have the energy and focus to study more efficiently, as the right diet is crucial in being successful and healthy in college.

Plant-based diet

Many ailments are better managed and occasionally cured by a plant-based diet (Beezhold et al, 2015, Buxton, 2014, DiCaprio, 2016, & Seiter, 2013). An individual, who follows a plant-based diet, produces 50% less carbon dioxide, uses an

eleventh of oil, a thirteenth of water, and an eighteenth of land, as compared to an individual following an omnivorous diet. As individuals age, they have increased risks of heart disease, high cholesterol, high blood pressure, diabetes, and some cancers, and the need for a sufficient amount of nutrients increases. For example, sufficient amounts of protein reduce the risks for low immune function and osteoporosis. Plant-based diets not only reduce said risks, but they can also reverse the damages done by chronic diseases (Esposito, 2015).

Deficiencies.

Due to marketing strategies that involve linking key nutrients with food products — calcium with dairy products, protein in meat, poultry and eggs, iron in beef, and essential fats with fish — individuals are convinced that a diet lacking animal products would lead to extreme deficiencies. These marketing tools have allowed farmers to make a living off exploiting animals and destroying the environment. As Dr. John McDougall stated in his article, *Diet, Children, and the Future*,

One in every three children in the US is now overweight or obese [...] one-third of all children born in the year 2000 are expected to develop diabetes during their lifetime.

Additionally, artery disease, leading to strokes and heart attacks, and common cancers of the breast, colon and prostate, also begin in childhood. (para. 4, 2012)

Thus, the children in this generation are expected to live a shorter lifespan than their parents. However, if a child is raised on a plant-based diet, and if they get the

sufficient number of calories for growth, parents never have to be concerned if their child is getting sufficient protein, amino acids, calcium, iron, zinc, essential fats or any other key-nutrients (McDougall, 2012).

Fertility.

Women who eat plant-based diets have an increased chance of conceiving, because they are sufficient in the amino acids required for the specific cells to perform their function. During pregnancy, it is much simpler for a woman to get a sufficient amount of nutrients to her child, if she is eating whole plant-based foods. As mentioned previously, this is because animal products lack sufficient amounts of the key-nutrients needed to support a healthy pregnancy (Physicians..., 2016).

Well-being.

A study, conducted by Beezhold et al, shows the effects of a plant-based diet, a vegetarian diet, and an omnivorous diet, on an individual's mental health. Individuals from the ages 25-60 years old were asked questions, via an online survey, regarding their diet, health, lifestyle, wellness, and questions that measured their stress, anxiety, and depression levels. The results showed that age and gender related directly to the levels of stress and anxiety. Overall, individuals with a plant-based diet, showed a decrease in stress and anxiety levels. This study shows how plant-based diets have a positive effect on an individual's mental health; in addition to their physical health – which has already been previously proven (Beezhold, 2015 & DiCaprio, 2016).

Alessandra Seiter, in her article “From My Eating Disorder to My Life’s Purpose” explains how she saved her mind, body, and spirit from being overtaken by her eating disorder, by adapting to a plant-based diet. After a year and a half of strict meal times and cardio routines, Seiter was introduced to veganism. At first, Seiter used veganism as another excuse to reject high calorie foods, and she used veganism to mask her eating disorder. After listening to Colleen Patrick-Goudreau’s *Vegetarian Food for Thought* podcast, Seiter realized the devastating injustices inflicted onto the beautiful beings that reside with humans. The pain and sorrow that Seiter felt towards the individuals inflicting this pain on innocent creatures, was enough to drive her out of her eating disorder. This article specifically describes how veganism can be the driving force into recovery and the power of healing that a plant-based diet has (Seiter, 2013).

Further investigation will show how it is sustainable for the University to adapt a plant-based menu — or at the very least, plant-based options — and how those options can provide pathways of health, prosperity, and sustainability of the planet and its inhabitants.

Proposal

In the Central Valley of California, eating a plant-based diet is extremely uncommon, as it is the prime area of animal agriculture, as well as part of the culture. Therefore, college students at the University of California, Merced, that have adapted the plant-based lifestyle are likely to have difficulty finding healthy foods that are in line with their eating habits. While dining at

the University provides vegetarian options, they have yet to offer options that are strictly vegan. Supplying plant-based food options is a simple and easy solution when compared to the severe destructions of animal agriculture. If the University continues neglecting to provide healthy food options, individuals and the environment will greatly suffer.

In addition to supplying more food options, the University should advocate for vegan clubs and demonstrate the unsustainability of animal agriculture. Workshops and courses should be offered to teach students the importance of being knowledgeable of their food choices. These clubs and workshops would show how animal agriculture is unsustainable — farmers are unable to keep up with the growing population and the growing demand for meat, which leads to the destruction of rainforests, species extinction, ocean dead zones, water and air quality, climate change, and disease. The perfect opportunity to discuss and teach students about animal agriculture is in the required “CORE 001” class. The class addresses water conservation and the triple zero affect; however, it fails to mention the root cause of such deprivations and overuses. The University of California, Merced will not reach their goals of sustainability without addressing animal agriculture. Thus, the University should add to their statement of sustainability that sustainability means the ability to provide enough food to nourish the world.

Benefits

Plant-based diets rely heavily on fruits, vegetables, whole grains, beans, legumes, nuts and seeds; therefore, individuals eating plant-based obtain a higher number of vitamins, minerals, phytochemicals, and fiber. Purchasing these foods saves an individual \$750 a year. Health benefits for these individuals include a reduced risk of many conditions such as: type 2 diabetes, cardiovascular disease, heart disease, hypertension, stroke, obesity, and some cancers, because the cholesterol is not consumed, and plant-based foods are free of added hormones and antibiotics. In a well-planned plant-based diet, little risks of deficiency exist, and the diet is fit for all individuals including children, pregnant women, and elderly (I Love..., 2016). The students and faculty on campus would experience an increase in energy and focus, that is much needed to fit the high demands of student and teacher lifestyles. Thus, students struggling with stress, anxiety and depression, will find themselves overcoming such struggles. As the University shifts to offering more plant-based foods, the overall health, wellbeing, and productivity of students and faculty will increase.

As previously described, breeding, raising, and feeding animals for food is an extreme waste of the worlds natural resources. Agricultural land and the resources used in animal agriculture, takes up 40% of the earths land, while a plant-based diet requires a significantly less amount of land, water, and fossil fuels. Ten billion individuals could be well nourished with the food that is grown to feed cattle, whereas only 82% of the starving children see food fed to animals that are sent to be

eaten in westernized countries. Thus, as less of the world's land is used for animal agriculture, more space is available for the growing population and the food used to feed the animals can be used to nourish the entire world.

If the University can encourage and support individuals that live a plant-based lifestyle, other students and faculty will be influenced to follow suit, along with their families. Since the University is advocating that they are the most sustainable campus, they should be addressing the many destructions that animal agriculture has on the planet. Once they do, the University will be “the most sustainable” campus. As stated earlier, as the University begins to offer more plant-based food, the overall health, wellbeing, and productivity of students and faculty will increase.

Method

Now is an impeccable time for the University to introduce plant-based eating, since they have recently commenced their 2020 Project. Changing the University goals of sustainability and food options would require cooperation of members of the administrative authority, of whom should recognize the extreme destructions of animal agriculture and should seek to do their part to eliminate the unsustainable methods. With the approval of these individuals, the food preparers would attend a class or a workshop in which they would learn the basics of a plant-based diet. Afterwards, the food preparers would be given the option to adjust the menu already at hand, to accommodate a plant-based diet; or to create a whole new menu from scratch.

Eliminating all foods that contain animal products or bi-products is unreasonable; – as not all individuals care about the wellbeing of themselves, other individuals, animals, or the environment – therefore, such options would still be available. However, like new students are taught time management, they would also be taught the importance of being aware of what one feeds their body and the unsustainable methods of animal agriculture.

Conclusion

If the entire population of students (6,685 undergraduates and graduates) at the University ate plant-based, the students alone would save 7,353,500 gallons of water, 300,825 pounds of grain, 200,550 square feet of forested land, 133,700 pounds of carbon dioxide, and 6,685 animals from slaughter, in a single day (DeCaprio,2016). Despite the University's 2020 Project objective to “support UC Merced's sustainability goals”, and their attempts at being “triple zero”, obvious and devastating problems of animal agriculture are being neglected. By supporting plant-based diets and making efforts to eliminate animal products, the University of California, Merced, can start a chain reaction – leading to the elimination of the environmental, personal, and economical problems, caused by animal agriculture and support a healthy, sustainable generation of students, that could continue to free the world from deforestation, world hunger, species extinction, drought, disease, ocean dead zones, greenhouse gas emissions, water and air pollution, and global warming.

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