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ENVS 201

Veganism and the Environment

For the past three years, I have been a vegetarian. I made this choice because I have always loved animals and did not feel comfortable eating flesh from their dead bodies. However, I was ignorant of the abuse and mistreatment animals endure within the egg, dairy, wool, leather, and other animal product industries. One Sunday afternoon last summer, I decided to watch a documentary called **“Vegucated”**. As I watched footage from egg and dairy farms, tears began to gush down my face. I did not cry like I cry at the end of a sad movie. I screamed and writhed in pain as if I was just informed that my best friend had been murdered. From that moment on, I knew I could never contribute to that kind of torture any longer. I made my decision and have been happy with it ever since. It has only been approximately five months since that heartbreaking day, but already I can feel an improvement in my health, my mood, and other aspects of my life. I am constantly doing more research about veganism and learning information that is quite fascinating. One of the most fascinating things I learned was just how much better for the environment veganism actually is. Having a vegan diet can help conserve freshwater, topsoil, and energy while decreasing greenhouse gases.

When most people become vegan it is either because of their health or, like me, their disgust and heartbreak over the unethical treatment of animals. Very rarely is environmental

impact someone's number one reason for going vegan. At the **Eugene Veg Education Network (EVEN) Cruelty-Free Thanksgiving Potluck** that I attended last week, I spoke with many individuals about their number one reason for going vegan and their thoughts on the environment in relation to their food choices. One woman named Mary said that she had drove past livestock farm and saw how degraded and dead the land was there in addition to the filthy, overcrowded quarters the cows were forced to live in. Seeing both the degradation of the Earth and the mistreatment of animals were the reasons Mary decided to be vegan.

Others that I spoke to had similar reasons, but not one person said that their number one reason was to preserve the Earth. In a larger study, 33 people with plant-based diets were asked about their motives for their dietary choices. None of them reported that the environment was their main concern, but for most, eating little to no animal products was part of their whole lifestyle which was aimed at being as sustainable as possible (*Appetite*). I believe this demonstrates how large the disconnect between people and the environment really is. Humans view themselves as entirely separate from the Earth which influences many of our decisions that happen to degrade the environment. However, no matter what the reasons are, being vegan does slow the degradation of the environment in more ways than one.

First of all, “the livestock population on average outweighs the U.S. human population by about 5 times” and livestock “consumes 7 times more grain than humans.” The U.S. produces an annual amount of 8 million metric tons of animal protein which is well over the recommended daily amount of protein for the entire population. In current society, most families and people in the U.S. can afford to eat meat every day compared to 100 years ago when most families and people could only afford to eat meat once a week, at most. Therefore, eating meat has been related to economic status and class.

This paradigm has influenced us to over-consume meat and other animal products on an unhealthy level. Milk production alone has increased from 53.1 billion kg/year in 1944 to 84.2 billion kg/ year in 2007 (Capper, Cady, Bauman). Meat, milk, and eggs are so affordable nowadays because of the industrialization of agriculture. Farms have become factories, minimizing their expenses, and increasing their profits with efficiency that has compromised ethics, health, and the environment.

Most often, cows are fed corn and growth hormones which fatten them up at an earlier age in order to slaughter them at an earlier age. The longer the cow takes to reach a slaughter-ready build, the more capital is invested into the cow. From an economic point of view, it makes sense to invest as little capital as possible to get the most output. Growing corn is highly resource intensive, using large amounts of water, depleting soil, and needing fertilizers and pesticides. **As mentioned above, the livestock population outweighs the human population heavily and they also eat more than humans do. It requires a lot more corn to feed livestock than it does to feed humans. It takes 100 times more water to produce one kilogram of animal protein than it does to produce the same amount of plant protein.**

For example, it takes 200,000 liters of water to produce one single kilogram of beef (Pimental). Livestock production is an inefficient use of water that could be used to grow crops to feed the many hungry human beings in the world instead of only feeding less than half of the people in the world. That portion being the wealthiest portion of the world. The use of monoculture to grow corn in addition to over-grazing by livestock leads to the erosion of top soil and the degradation of the quality of soil. Naturally healthy soil is being substituted by artificially fertilized soil. Most fertilizers contain large amounts of nitrogen, which in large doses over a long period of time can make the soil uninhabitable for most plants by acidifying

the soil. Excess nitrogen in the soil also makes the land more susceptible to drought which would increase the already high amounts of water to grow corn. Not all of the fertilizer used is taken up by the target species. Much of the fertilizer makes its way to nearby streams and rivers which eventually lead to the ocean, fueling algal blooms. These algal blooms use up all of the oxygen during their life and decay cycles, creating hypoxic or even anoxic zones in the ocean (Horrigan, Lawrence, and Walker).

Artificial fertilizers do more harm than good when used in agriculture. Farmers are unable to use the manure from the livestock to fertilize their crops because it contains high amounts of bacteria and viruses. These bacteria and viruses are extremely dangerous and hard to kill. Industrial farmers keep animals in such small quarters, that the animals end up living, eating, and breathing within their own excrement along with the excrement of all of the other animals in which they share their space.

The farmers give the animals large amounts of antibiotics in order to ward off disease long enough to slaughter them without contaminating the meat to be sold in your neighborhood market. The antibiotics kill off the weak bacteria, leaving only the strong bacteria behind to replicate. With more antibiotics, bacteria become stronger and those “super-bacteria” are still present in the stools of the livestock, making it toxic waste (Brooks).

Pesticides are also used in large amounts when growing corn to feed livestock. Without considering the long-term or even short-term effects of pesticides, they seem ideal, killing off the pests which literally eat farmers' profit. However, most often, the pesticides kill the pests and the prey of the pests which have a harder time rebounding to their original population size. If there are less things to eat the pests, then there will be more pests. Also, many insects become immune to certain pesticides and new pesticides have to be used in order to save the crops from being eaten.

Of course, pesticides also have a profound impact on the immune systems of birds, bees, dolphins, seals, and whales (Horrigan, Lawrence, and Walker). Introducing these harmful chemicals to the environment has a much larger effect than what was intended, yet they are still used every day.

The production of animal protein also greatly impacts the atmosphere and global climate. **Livestock contribute 28% of the greenhouse gases in the U.S. in the form of methane, nitrous oxide, and carbon dioxide (Brooks).** Out of all of the different greenhouse gases, methane has the largest impact on global warming which is an already frightening problem in the world today. Decreasing the amount of methane being put into the air each year could potentially slow down global warming and its unpredictable effects. In 2007, the *Journal of Animal Science* came to the conclusion that the amount of carbon dioxide per cow has increased from 13.5 kilograms of carbon dioxide per cow in 1944 to 27.8 kilograms per cow in 2007 (Capper, Cady, and Bauman). This increase in carbon dioxide emissions is caused by the industrialization of farming and the transportation of the animals from farm to slaughterhouse to grocery store. However, the same article claimed that the production of milk has become more efficient over the years, decreasing from 3.66 kilograms of carbon dioxide per kilogram of milk in 1944 to 1.35 kilograms of carbon dioxide per kilogram of milk in 2007. Also, the milk yield per cow has increased from 2,074 kg/yr in 1944 to 9,193 kg/yr (Capper, Cady, and Bauman). This impressive increase in efficiency, however, came with costs, some of which have already been mentioned above.

In addition to using pesticides, fertilizers, and antibiotics, the dairy business has made other changes to the industry to increase the milk yield with less cost input. Most dairy farms use 90% Holstein cows which are the black and white cows you see on the milk cartons in the refrigerator aisle. Holstein cows are known for their massive amounts of milk production which

is why they are bred specifically for the dairy industry. All dairy cows in 1944 were impregnated naturally with bulls that are either transported from another farm or kept separate from the female cows unless needed for breeding. Over the years, the use of artificial insemination has become quite common. This has decreased the need for bulls and increased the chance of pregnancy.

However, artificial insemination is in fact rape, which is unethical among humans in most cultures. Cows do not have the same ethical standing as humans so their mistreatment is overlooked and artificial insemination is continued to ensure that the demand for milk and other dairy products is met. Another way farmers meet this demand without increasing the cost is to limit the mobility of the cows, keep them in temperature controlled environments, and only feed them just enough so they will lactate (Capper, Cady, and Bauman). These methods have indeed increased the efficiency of dairy production, but at the cost of ethical consideration of the lives of the animals and the detrimental impacts on the environment.

The production of animal products, in general, uses more resources, creates more harm to the land, and creates more waste than the production of plant products. In the world we live in today, we must be mindful of our impact on our surroundings and “considering that the average American consumes 97 pounds of beef (and 273 pounds of meat in all) each year, even modest reductions in meat consumption in such a culture would substantially reduce the burden on our natural resources” (Horrigan, Lawrence, and Walker).

The notion of meat-eating equating to high economic status and class has spread worldwide and the U.S. serves as a model for the rest of the world. The U.S. is one of the wealthiest countries in the world and consumes the most amount of animal products. Other countries look at how we consume and strive to be able to consume the way we do. If every country did that, we would need four Earths instead of the one that we have (Martin).

An interview with **Dawn Moncrief**, the founding director of **A Well-Fed World**, described this problem quite well. When asked about her insight on the future of veganism in today's world, Moncrief said,

“Unfortunately meat consumption is growing at the global level because people in lower- and middle- income countries are eating more meat per person. That's why it's all the more important that Americans and other people from high-income countries reduce our per capita animal consumption. We need to set a better example so that eating animals is not associated so strongly with wealth and power.”

So far, about 7.5 million people in the U.S. have made their decision to stop eating and using all animal products (Harris). This is a huge step in the right direction and hopefully the spread of education continues. I am sure if more people were aware of just how much it would help, they would cut down on how much meat and other animal products they consume.

Resources:

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- 6.) Horrigan, Leo, Robert S. Lawrence, and Polly Walker. "How sustainable agriculture can address the environmental and human health harms of industrial agriculture." *Environmental health perspectives* 110.5 (2002): 445.
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