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Factory Farming: Polluting the Environment by Supplying one McDonald's at a Time

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The days of small, family-owned farms that grew and produced enough meat, milk, corn, and other products to support local communities are long over. Instead, they have been replaced by large, industrial like 'farms' with thousands of acres of land and enormous herds of livestock. The yield of meat and crops that industrial farms are able to produce is far greater than the capabilities of production of a traditional farm, but there is an alarming reason for this difference. The initial creation of industrial farms was to meet the demands of fast-food restaurants, which have come to support and feed exponentially growing populations. The need for large quantities of ingredients at a low price-point all but shut out the small farms that safely and sustainably fed their communities for generations.

Industrial farms operate based on increasing their bottom line, while still managing to produce an unnatural yield of meat and crops to distribute across the nation. The reasons behind their ability to create and grow crops and meat, at a factory like speed, is due to the amount of chemicals used to maximize crop yields, and the combination of the use of anti-biotics and unnatural, but significantly more affordable conditions, for maintaining livestock. According to the Natural Resource Defense Council (NRDC) "the large-scale, intensive production of crops and animals, often involving chemical fertilizers on crops or the routine, harmful use of antibiotics in animals (as a way to compensate for filthy conditions, even when the animals are not sick)… [industrial farming] may also involve crops that are genetically modified, heavy use of pesticides, and other practices that deplete the land, mistreat animals, and increase various forms of pollution" (NRDC). These "various forms of pollution" (NRDC) include water, air, and land pollution that all contribute to an unhealthy environment.

Industrial farming has several detrimental effects on the environment. One of the most harmful aspects to the environment is the use of genetically modified organisms, commonly referred to as GMO's. The use of GMO's requires chemicals such as pesticides and herbicides to

be used to prevent crop loss and increase the longevity/survivability of the plant. When the selection of individual, desirable genes in a crop plant were modified and reproduced artificially in a lab, then later developed into millions of seeds that contain identical genetic makeups, it excluded the natural capabilities of a plant to survive conditions that threaten its being. "When herbicides are continually sprayed, there is a high selective pressure on the weed populations. Resistant populations arise from random mutations within individuals that happen to survive the herbicide treatments" (Neves et al.). Not only are new weed species arising due to the continual use of targeted herbicides, but the crops and food being produced and consumed are now exposed to chemicals that are potentially detrimental to human health.

Another harmful effect of industrial farming and agriculture on the environment, is the inhumane and unnatural environments in which livestock are kept. Industrial farms create issues regarding both land and water pollution. To streamline 'care' and manage expenses, livestock are often kept in large, concrete buildings with sewer like drainage systems to remove animal waste. These drainage systems, which remove animal waste, dispose of it into nearby, man-made pits [otherwise known as lagoons] in the land. Often times, the runoff leads to the pollution of water supplies. "… waste-containment areas often leak and, during large storms, can rupture. To dispose of the waste, CAFOs [concentrated animal feeding operations] spray this manure onto farm fields. The environmental damage from spraying and from leaking, ruptured lagoons can be devastating. Surface and groundwater contamination (serious threats to aquatic ecosystems) and excessive nitrates in drinking water (serious threats to public health) stem from CAFO pollution. Animal waste can also include pharmaceutical residues, heavy metals (like copper and zinc) and harmful bacteria, which can leach into water supplies" ("How Industrial"). The extensive pollution and damage to the environment alone from the contamination of water sources and fields created by these industrial farms furthers cause for alarm.

Industrial farms operate based on increasing their bottom line while meeting the demands of consumers to produce large quantities of meat/crops. To identify the main consumers who perpetuate the growth and support of these industrial farms would be to name the thousands of fast-food restaurants that our nation has come to rely on to provide breakfast, lunch, and dinner, 365 days a year, all for a low cost. Corporations such as McDonald's, Burger King, Taco Bell, and Wendy's are able to provide meals at incredibly low prices because of the lack of responsible sourcing of their ingredients such as meat, dairy, and corn. If legislation and

guidelines were implemented in hopes of changing the current methods of industrial farming, such as not allowing the mass production of GMO's or banning the use of pesticides/herbicides, these large and influential fast-food companies would join together to challenge it. Several solutions that would enable sustainable agriculture to thrive exist, but they all come with a price. Industrial farming has successfully eliminated virtually all the costs that sustainable agriculture producers incur which make their products more expensive. However, these costly practices are what make the crops and livestock safe for both the environment and people. For example, rotating the type of crop grown in a field as well as not planting fields for a year in order for the soil to regain nutrients, would cost industrial farms both time and money, something they avoid at all costs. These practices are common in sustainable and have been practiced by responsible farmers for hundreds of years.

Responsible farmers and organizations understand that for food to be produced safely and humanely, there are certain costs that are unavoidable when seeking quality. Smaller, organic farms that focus on minimizing their environmental footprint, while still producing crops that can supply grocery stores and restaurants with quality ingredients, are key to irradicating the practice of industrial farming. Despite the increased costs of crops, and the subsequent increase in product price, the positive impact it would have on human health and the environment makes the costs justifiable. Although it is possible to mitigate some of the damage that industrial farming has done to the environment through legislation and imposing stricter rules, the most effective way to bring an end to industrial farms would be through a tremendous amount of consumer protest. The most clear and impactful way to reach the attention of the people who run these industrial farms is to decrease their profits. If unanimous consumer choices were made to avoid spending money at any restaurant that purchases from industrial farms, such as McDonald's, a real impact could be made.

Works Cited

"How Industrial Agriculture Affects Our Water." *FoodPrint*, GRACE Communications Foundation, foodprint.org/issues/how-industrial-agriculture-affects-our-water/. Accessed 23 Nov. 2020.

Neves, Jessica, et al. "Environmental Impacts of GMOS." *Debating Science*, U Of MASSACHUSETTS AMHERST, 20 Apr. 2016, blogs.umass.edu/natsci397a-eross/environmental-impact-of-gmos/. Accessed 23 Nov. 2020.

NRDC. "Industrial Agriculture 101." *Natural Resources Defense Council*, 31 Jan. 2020, www.nrdc.org/stories/industrial-agriculture-101. Accessed 23 Nov. 2020.