
Factory Farming: Development And Its Major Environmental Problems

Farming and raising animals for food have been an integral part of human culture for decades. Animal farmers often keep animals in an intensive area and using industrial devices to boost the process of production. Products of such farms are often meat, milk, and eggs. Animal farming is also known by its critics as animal factory farming or CAFO (concentrated animal feeding). Factory farming which has been defined in Merriam-Webster dictionary as “a large industrialized farm” has been designed with the idea of more food production at the lowest costs. While it seems that these days the heated debates about using electric cars and public transport have increased around the world to avoid more climate change problems, there are issues regarding whether animal farming is one of the main culprits of climate change. Cole et al. (2015) noted that animal farming exceeds all forms of transport in terms of global greenhouse gas (GHG). Thus, the important role of animal farming and its adverse environmental effects cannot be neglected. Animal agriculture is a leading cause of water, atmosphere pollution and one of the contributors to biodiversity loss. However, some benefits are associated with this means of farming. Using animal farming not only has provided more efficiency in the food industry but also causes health benefits.

Animal farming development and its benefits

Although many people would oppose this opinion, factory farms bring about efficiency in the food industry since animal farms often process and produce edible stuff in a short time but in a large amount. The major reason for this is probably that animal factories almost have been industrialized. Carlton Gyles in 2008 noted that from 1970 to 2005 in America, milk, meat, and egg production has dramatically increased but the production time of a 5-pound chicken has decreased from 12 weeks to 7. Moreover, Nicholson et.al (2001) explained that the productivity of the intensive livestock systems is two times faster than mixed crop-livestock systems and six times faster than grazing systems. In contrast to evidence which presents the view that animal farming is beneficial an alternative perspective illustrates that factory farming is one of the primary contributors to major environmental problems in the world and those who agree with this idea may assert that animal farming leads to water and atmosphere pollutions as well as loss of biodiversity.

Pollution on the water caused by animal farming

Animal farms have become the main contamination source of surface and groundwater resources. Like other live creatures, the feces and urines of animals contain various viruses and bacteria which would easily enter water sources just by rainfalls, if they do not effectively collect. It should be also noted that using chemical hormones and drugs such as antibiotics, have been increasing in animal agriculture and some active components of these chemicals even remain in animal excrements and all the pollutants would be negatively changed water quality. Moreover, the environment of animal farms is expected to be included cleaning and hygiene facilities because disinfection and cleaning are important prevention procedures to spread pollution in animal farms that are located near rivers or oceans. Since there are not still adequate and exact

sterilization standards in some areas and many farms deprive of disinfection facilities, so infiltration of pollution on surface and groundwater sources is caused by such animal farms. Allah bakhsh et al. (2014) conducted research into the assessment of tetracycline contamination in surface and groundwater resources located near animal farming houses in Tehran, Iran. In this study, two locations were selected to take samples and a total of 24 samples were collected and analyzed over 6 months. Their research findings indicate high levels of Tetracycline in surface and groundwater locations near animal farms. They also noted that wastewater effluent can be potentially considered as a pollution source of surface water resources. They continue by suggesting that more monitoring of antibiotics levels in water sources near animal farm plains is needed to prevent water pollution.

Pollution on the atmosphere caused by animal farming

Animal farming pollution in the atmosphere focuses on greenhouse gas emissions which give rise to increased global warming. As a result of the high level of indigestion in animal farms where animals are fed with low-quality grains, an eye-catching amount of methane would enter the atmosphere. Besides methane produced by animal flatulence, methane extracted from animal feces is also considerable. In addition, transporting animal feeds to animal farms and distributing animal production from animal farms to customers bring about a lot of travel and will end up with a lot of carbon emissions. United Nations Food and Agriculture Organization (FAO) reported in 2006 that livestock products are responsible for 15% of global greenhouse gas emissions. They also revealed that animal agriculture accounts for 9% of global carbon dioxide emissions, 35 to 40 percent of global methane emissions, and 65 percent of nitrous oxide emissions.

Intensive farming contributes to species extinction. Firstly, animal excrements, as well as animal gases that migrate to agricultural fields and water sources would destroy a vast number of creatures that are not familiar with such components which often contain chemical matters. Secondly, forests and natural grasslands have been converted to big animal agricultural lands and as a result of such huge deforestations, a vast number of habitats that were specific in these areas have vanished after a while. Thirdly, by converting natural areas to animal farms, hunting predators have increased because wild animals are often considered a potential threat to domestic animals. A global assessment report on biodiversity and ecosystem services which was released by The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) released a report in 2019 and pointed out that human activities have resulted in species decline. They noted that major reasons for such nature's decrease are including deforestation, overfishing, bushmeat hunting, invasive alien species, pollution, and climate change.

To conclude, there are several significant issues that show that while animal farming brings about productivity and efficiency in the food industry as well as humankind's health benefits, intensive animal farming is a primary driver of global warming, global biodiversity loss, and a major source of groundwater and surface water contaminations and after seeing these evidence, there is no way we can agree with this idea that nature and people are in trouble. Factory farms place animals in small spaces or pack them tightly and they are often being pumped full of hormones or drugs to become more productive and less sick. As a result of such unethical treatments, animals are living under stressful conditions and it brings about the animal's health to decline, which is not only dangerous for animals but also affects human

kinds' health due to the fact that most people use animals products. Since antibiotics, anxiety, and growth hormones have been linked to increased risk of chronic diseases, after a while, we will face a vast number of persons who suffer from severe diseases such as breast and prostate cancer. In addition, as a result of such brutal behavior with the animal in farms, cruelty in societies would become common caused to more social inequality.

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