

Global Warming & Dairy Animals: Preventive Measures

Bhupesh Chahal, Naleeni Ramawat and Gaikwad D.S.

Amity Institute of Organic Agriculture, Amity University, Noida (U.P.), India.

SUMMARY

The animal farm sector has one of the largest consumer bases in the whole world, which makes a major impact and contribution to many of the environmental problems, of which primarily is the global warming and climate change problem. Animal husbandry is the subject that not only includes dairy farm animals, but also the grains and animal fodder production, storage and disposal, use of water, also the supply and disposal of animal products is among other important factors of impact of the overall production process. Here, much of the facts and information have been brought together regarding the major adverse impacts and effects of animal farm sector production on the sustainability of the environment, socially sustainability, health of the public, as well as welfare of the animals: generally, the impacts of the farm animal sector which happen on a global scale are often overlooked and ignored without much consideration. Well, in a recent study on similar and relate-able data, it was calculated and found that the sector contributes major to the greenhouse gas emissions on a global level and was also seen that it is very important that - talking in terms of Carbon Dioxide emission (GHG) - the emissions of CO₂ particularly from the agricultural sector are higher than those from the transport sector.

INTRODUCTION

Many of the effects of global warming have already been met, such as glaciers melting, rising sea levels, floods, hurricanes, and also the other weather events which are severe and extreme that happen every now and then. 'A recent report by the IPCC (IPCC 2007b) warns us that climate change "could lead to some sudden or irreversible effects." We are now discussing the allocation of global emissions by the animal husbandry sector, which can be understood and analyzed on the basis of the data which was reported in the Livestock's Long Shadow present in the FAO (FAO 2006) and the latest reports given and provided by the IPCC. According to figures provided by FAO (FAO 2008), approximately 56 billion of the world's domesticated animals are raised and many are slaughtered for annual use in the whole world, which is likely to increase in the coming years. As we see that if the number of domesticated animals raised for egg, meat, and milk production increases, hence their production will increase.



(Source: <https://caes.ucdavis.edu>)

Animals are now bred in sturdy production systems where they are kept in cages, crates, barns, and storage facilities such as storage facilities. These landless areas have the potential to make and produce more compost than which can be used as a fertilizer in the vicinity of plants (FAO 2005b), even the manure is then rather "distributed in a small area, which leads to the run-off of the minerals- phosphorus, nitrogen, and other pollutants".

The animal husbandry sector accounts for an average of 9% of the total CO₂ emission worldwide, which is mainly the outcome of organic production of fertilizer, farm energy use, transport of feed, processing of an animal, and the changes in land use. Fuel heating to produce food fertilizer can easily emit about 41 M tons of CO₂ on an annual basis. According to FAO figures, emissions from CO₂ in the study of farm animals reach more than the number in tens of millions of metric tons every year. On average, 0.8 million tons of Carbon Dioxide is coming out on an annual basis only from the sector of transport of feed and the animal products till the point for its use. Farm animals and animal production areas make up just a little above a quarter of the world's land-use area, which uses more than one-third of all the agricultural land which is available, which also includes the land used for the food crops. Degradation of soil, cultivation, deforestation, and desertification of land is also very much responsible reasons for the emission of GHG from land use in the sector of livestock. Feeding the world's livestock population has a requirement of around 80% of the global soybean production and yield and also more than 50% of all maize yield, a crop that grows mainly depends on artificial nitrogen-based manure. The nonartificial or the natural sources of getting the fixed nitrogen, in a state that is readily present as a plant absorbable fertilizer, are very much limited, requiring the making of the artificial fertilizers. The veterinary sector also oversees the production of near around 35-40% yearly produced anthropogenic (CH₄) methane caused by fermentation in the ruminants and the manure of farm animals. Ruminants release methane which is CH₄ as part of a process that is digestive in nature and involves fermentation at the microbial level. Around 70% of the emissions of N₂O which is through anthropogenic are due to combined animal and crop farming, animal farm production, also including growing of food crops, which accounts for 65% of N₂O production on a worldwide scale. Urine and Manure of the farm animals, once they are absorbed into the soil, start emitting N₂O.

Preventive Measures

Improved regulation is needed to behave as pillar resources that can be accounted for their emissions of GHG. One of the most critical steps is to quantify the value of natural resources - these resources are usually absolutely inexpensive or free - leading to "overuse and pollution". To date, many of the mitigation and prevention strategies that have been developed by various veterinary agricultural researchers have been focused on a technological solution basis. Anaerobic digester projects locally and internationally which are now used in some large confinement environments, trap methane in the compost for use as an energy source but usually do not work on a small farm. As consumers become more and more interested in environment-friendly strategies and products, hence reducing the consumption of animal husbandry produce like eggs, meat, and milk, and shifting to choosing solid products, like the ones from the natural system, can show equally sensitive outcomes and strategy. Even shifting to farming organically can potentially help us in reducing the GHG emission and also the carbon emissions.

CONCLUSION

With the increase in the number of domesticated animals raised for egg, meat, and milk production, so did the production of their products. By around 2050, the overall animal farm production is expected to almost double the current levels. Even the impact of animal husbandry on the environment requires that the governments, with various international organizations, also the producers, and last but not least the consumers should pay close focus to the importance of egg, meat, and dairy products. Reduce and prevention of our environment and damage which is caused to it by particularly this sector needs urgent changes in its rule implementation, practices of production, and the patterns of its application.

REFERENCES

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2367646/>
<http://www.ipcc.ch/ipccreports/ar4-wg1.htm>
http://www.fao.org/ag/againfo/resources/documents/pol-briefs/01/EN/AGA01_10.pdf.
<http://www.fao.org/newsroom/en/news/2006/1000448/index.html>
<http://faostat.fao.org/>