ENVIRONMENTAL IMPLICATIONS OF LIVESTOCK FARMING

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ABSTRACT

Due to increase in population, the demand for food has increased much, which has taken a huge toll on environment. The depletion of natural resources was much higher due to the rising demand for food. The major cause for deforestation was the conversion of forests into agricultural land and livestock farming. The contribution of livestock rearing is much higher in the depletion of natural resources such as water, forests and clean air. The green house gas emission from livestock is the major cause for climate change in the world. The goal of this research is to determine the impact of the environment on sales and profit as a measure of business success, as well as to investigate the supporting roles of the environment and the factors that influence farmers' decisions to engage in agricultural operations.

INTRODUCTION

Livestock is the major contributor of methane gas, and deforestation which is the prominent one in causing climate change and global warming (Emanuela, 2019). The demand for meat and dairy products is predicted to increase by 70 percent in the year 2050 during the rising population (Sarah, 2019).

Next to transportation, the livestock rearing for milk, meat and egg production is the major contributor to global greenhouse gas emissions which is around 14.5 percent. The Carbon dioxide emission is huge in case of livestock rearing which are at least 32000 million tons per year. Its contribution to total greenhouse emission is around 52 percentages. The carbon footprint is heavy in case of red meat production.

Water scarcity is the burning environmental challenge faced by many countries all over the world. In such a situation, the huge amount of fresh water is used for livestock rearing. It occupies huge share of water in the total farming activities which is around 92 percent of freshwater. It is found that a single cow can drink up to 50 gallons of water per day, which will be doubled in the summer. The production of eggs, cheese and milk is also highly water intensive in nature. Apart from direct consumption of water by livestock, the growing of fodder and other plants for livestock are also water intensive.

The consumption of land is also huge for livestock farming. It is found that 45 percent of earth's land is devoted for livestock rearing (Edmundo, 2017). Its share on the total agricultural land is 70 percent. It is alarming to note that the fact the land requirement

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estimated per cow is 2 to 5 acres. In many parts of the world, the maincause for deforestation is livestock rearing and growing of fodder. It is estimated that 1 to 2 acres of rainforest is cleared every day for animal agriculture. The Amazon forest has been encroached mainly due to the animal agriculture.

When compared to developed countries, in the developing country like India the impact of livestock farming on environment is little smaller, since the indigenous methods of livestock rearing and farming is widely adopted. But in recent times, due to modernization of the animal agriculture, the practice of rearing of indigenous varieties of livestock has been much abridged in India. The animal agriculture has become commercialized which tend to increase the environmental impacts of livestock farming in India. The requirement of fodder and water consumption is lower for indigenous varieties of livestock than the hybrid varieties. Due to commercialization of livestock farming and increased demand for diary and meat products, the practice of rearing hybrid varieties of livestock has increased nowadays.

At this outset this paper aimed to analyse the impact of livestock farming on environment in Indian context.

Objectives

The objectives of the study is tofind out the land consumption for livestock rearing, to study the water consumption for livestock rearing, to analyse the impact of indigenous animal agriculture on resource consumption and to provide policy suggestions to lessen the impact of animal agriculture on greenhouse gas emission.

METHODOLOGY

The farmers who follow animal agriculture, by rearing more than 10 animals including cows, buffaloes, chickens and goats have been included in the study in the Attur Block of Salem District. In the two selected villages of Attur Block, viz. Kalleripatty and Yethapur, 44 farmers have been identified who fulfilled the required conditions desired for the present study. The primary data regarding the practice of livestock farming has been collected from the farmers through interview schedule and field observation. To analsye the collected data, both descriptive and inferential statistics has been applied.

Analysis and Discussion

The interesting facts found was the practice of growing of indigenous varieties of livestock is observed among 45 percent of farmers, which is welcoming trend. The practice of rearing of buffaloes was observed only fewer. A significant association was found between the practice of growing of indigenous varieties of livestock in majority and the quantity of feed consumption by the livestock. The consumption of feed for indigenous varieties of livestock is lesser when compared to hybrid or commercialized varieties. Of course, subsequent to their higher feed consumption, the hybrid varieties yield more. Despite their lower yield, the practice of rearing of indigenous varieties of livestockis a welcoming trend observed among the farmers nowadays. A significant difference is observed between the water consumption of livestock between the hybrid varieties of

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livestock and indigenous varieties of livestock. Thus in the matter of both feed and water consumption, the rearing of indigenous varieties of livestock is much better, in turn leaving a lesser impact on environment by conserving the resources of land for fodder growing and water. A Significant difference is found between the size of livestock and biogas utilization. Only big farmers doing the animal agriculture at large scale only attempted to utilize the biogas emitted from the livestock rearing. The practice of installation of gobar gas (biogas) plants and the utilization of biogas followed even in the small scale farming in 1980s, has been much reduced now a days, which tend to increase the methane gas emission from animal agriculture.

Policy Recommendations

The practice growing of indigenous varieties of livestock should be encouraged by the Government. The extinction of the indigenous varieties of livestock should be prevented, which were conducive to both our environment and to our health. In the Government welfare schemes also the indigenous varieties of livestock should be provided to the farmers. The practice of biogas utilization from livestock farming should be encouraged by the Government.

Conclusion

Due to the increased population and urbanization, the rearing of livestock has also increased to a larger extent, which cannot be avoided. At the same time, on its flip side, its impact of environment is much more in terms resource depletion and green gas emission. Thus it is the need of the hour to reduce the impact of livestock farming on environment by following indigenous livestock framing practices and growing indigenous varieties of livestock. On demand side, a step should be taken to cut down our consumption animal products to reduce the greenhouse gas emission and carbon footprint.

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