

Role of Indian Livestock in Agricultural Sustainability

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Abstract

Agriculture is a significant sector of the Indian economy which accounts for around 17% of total GDP. Over the last few decades, India's agriculture has grown at a rapid pace. However, with prosperity this sector confronts various obstacles. Monsoon instability, sub-division and fragmentation of land holdings, disguised unemployment, inequity in land distribution, depletion and exhaustion of soils resulting in low productivity due to overuse of fertilizers, lack of sound marketing facilities, lack of mechanization, and insufficient transportation facilities are some of the challenges that the Indian agriculture sector faces. Many of these concerns highlight towards the need of the hour: **Sustainable Agriculture**.

Introduction

Sustainable agriculture refers to farming practices that meet society's current food and textile needs without jeopardizing current or future generations need. Sustainable agriculture pertains to farming methods which allow production of crops or livestock without causing harm to human or natural systems. It avoids negative consequences on soil, water, biodiversity, nearby or downstream resources, as well as individuals working or living on the farm or in the surrounding environment. Mixed farming, permaculture, multiple cropping, agroforestry and crop rotation are all key elements of agriculture. Looking to its importance as a cornerstone of agricultural GDP, the livestock sector's

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contribution to agricultural sustainability is highly pertinent. In recent years, the livestock sector has emerged as an important segment of an expanding and diversifying agricultural sector in the Indian economy (Tisdell and Gali, 2000). The livestock farming is a very important socio-economic activity in Indian agriculture, as milk is the second largest agricultural commodity contributing to GNP (Gross National Products), next only to rice (Sarkar and Ghosh, 2010).

About 20.5 million human population rely on livestock for their survival. Small farm households earned 16 percent of their income from livestock, compared to 14 percent for all rural households. Two-thirds of rural communities rely on livestock for their livelihood. It also provides employment to roughly 8.8% of India's population. The livestock industry accounts for 25.6 percent of total agriculture GDP and 4.11 percent of overall GDP. Farmers benefit from livestock in a variety of ways, including income, employment, food, social security and draught.

Poverty and hunger are among the most pressing global concerns confronting the world today and their eradication is a prerequisite for long-term sustainability (Kozel and Parker, 2003). In developing countries, demand for animal products is predicted to rise by around 70% in the next 30 years, owing to population and economic growth. The livestock sector helps in resolving these issues by fostering sustained economic growth, social inclusion, and efficient natural resource management. The livestock revolution is predicted to have a considerable impact on rural poverty reduction and livelihood security (Birthal and Ali, 2005). Promotion of integrated farming is another way to ensure agricultural sustainability. Agriculture can be merged with cattle, poultry, and fish at the same site in an integrated agricultural system to generate year-round employment and additional revenue.

Animal health and welfare can be improved by minimizing the economic impact of animal diseases, improving food safety and reducing the possibility of antibiotic resistance. Thus, the livestock industry must invest in veterinary services and animal disease surveillance. Zoonotic diseases can be controlled by preventing animal diseases thus emphasizing on "One Health" concept, which aims to enhance human, animal, and world health, includes better livestock management.

Conclusion

The livestock sector in India is providing an ever-increasing contribution to agriculture in one or more manner that are sustainable in the country. However, in an era of globalization where national borders are disappearing at an increasing rate, the Indian livestock sector must be

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reorganized to ensure that it fulfils global quality requirements in addition to national rules. Only then can we expect to deliver at times when the entire world looks to India for mitigation strategies, such as when wheat is in limited supply in several countries due to the ongoing Russia-Ukraine crisis. Another benefit that can be obtained as a result of good quality assurance is in the dairy industry. Despite being the world's biggest producer of milk, India's exports remain insignificant. If this can be addressed, the advantages will trickle down to the most vulnerable persons of the key stakeholders. The livestock industry contributes significantly to poverty alleviation, food security, and long-term agricultural development. A billionaire and great philanthrophist Bill Gates concluded the importance of sustainable agriculture: *"Innovations that are guided by smallholder farmers, adapted to local circumstances, and sustainable for the economy and environment will be necessary to ensure food security in the future"*.

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