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Popular Article

Challenges and interventions on low productivity in the Indian livestock sector

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Abstract

Livestock is an integral part of agriculture, and it plays a significant role in the nutritional security of the people. Over two thirds of the rural population depend on this sector for their livelihood. India is the world's largest producer of animals; however, it only makes up 18.6% of the world's total milk production. The industry will face numerous obstacles in the course of reaching any given goal in the future. Some of the ideas put forth to lessen these difficulties include the use of sex-sorted semen technology, by-product utilization, feed supplements, switching out low-producing animals for high-producing ones, prudent use of antibiotics, marketing to organized markets, livestock-based integrated farming systems, public-private partnerships, and a separate cadre for livestock extension. Thus, livestock is the agriculture industry's new growth engine.

Keywords: Economic losses, greenhouse gas emission, integrated farming system, livestock extension, veterinary infrastructure

Introduction

Livestock is an integral part of agriculture, and it plays a significant role in the nutritional security of the masses. The industry supports 20.6 million people's livelihoods, accounting for 8.8% of the workforce. India has 512.06 million livestock heads, making it the country with the largest animal husbandry sector globally. It is the world's top producer of milk, contributing 18.6% of the global milk output. With 165.4 million tons produced, India is first in the world for milk production. The industry will face a number of obstacles in the future when trying to meet any given goal. Animal disease outbreaks, antibiotic resistance, and greenhouse gas emissions are examples of global challenges. Other issues include poor infrastructure and human resources for veterinary care, low animal



productivity, unpaid milk prices, an unorganized market for livestock products, low productivity per animal, and poor livestock extension, and feed-fodder shortages, are specific to India.

Challenges and interventions

Disease outbreaks: India is home to about 80% of the animal diseases listed by the Office International des Epizooties (OIE), including highly pathogenic Avian Influenza, Glanders, Foot and Mouth Disease (FMD), Haemorrhagic Septicaemia (HS), Peste des Petits Ruminants (PPR), Anthrax, Rabies, and New Castle Disease (NCD). Several economists use different economic models to evaluate the economic losses caused by major cattle illnesses in India. To enable real-time reporting of disease outbreaks, the National Animal Disease Reporting System (NADRS) has to be upgraded with digitalization and infrastructure support. Vaccination campaigns against all illnesses that can be prevented by vaccination, which target vulnerable livestock species, are another form of intervention. Mobile veterinarian services that offer first assistance, artificial insemination, deworming, and vaccinations right to farmers' doorsteps in distant places are one suggested intervention.

Antimicrobial resistance: Antibiotic use can be reduced by educating stakeholders about antimicrobial resistance and raising their level of awareness of it. Testing for drug residue in livestock products can be done in laboratory facilities.

Green House Gas Emission: Compared to carbon dioxide, methane has a warming potential that is 20 times larger. The methane emissions from livestock in India accounted for 15.1% of the total methane emissions worldwide. Enteric methane accounted for 91.8% of all greenhouse gas emissions in India. Livestock is expected to contribute approximately 15.7% of the world's enteric methane release by the year 2050.

Methane levels could be lowered, though, by environmental risk management techniques such as increased animal productivity, population stabilization, improved feed, and waste utilization. The Government of India (GOI) introduced the Galvanizing Organic Bio-Agro Resources Dhan (GOBARDHAN) project as part of the Swachh Bharat Mission (Rural).

Breed Improvement: Two basic techniques exist for improving breeds: crossbreeding and upgrading. However, there are other obstacles to enhancing the breeds, including as the scarcity of superior bulls and farmers' ignorance of scientific breeding methods. The fact that artificial insemination (AI) has only a 24.5 percent full adoption rate presents another difficulty. A few examples of potential interventions include educating farmers about scientific breeding methods, providing doorstep AI services, using progeny-tested semen for AI, utilising embryo transfer technology, etc. Furthermore, non-descript breeds rather than pure indigenous breeds should be the focus of cross-breeding and



grading up.

Milk Pricing: The fact that cattle producers are not receiving a fair price for their milk presents another significant obstacle. The profit is extremely small when compared to the cost of producing per litre of milk. Production costs for a nondescript milch cow are Rs. 26.76/litre, for a milch buffalo they are Rs. 23.17/litre, and for a crossbred cow they are Rs. 19.04. A reasonable strategy for milk pricing could be one of the suggested remedies, allowing farmers to recoup their input costs. It is necessary to structurally reform the dairy cooperatives with the backing of the National Dairy Development Board. Improved marketing facilities and supply chain management for animal products could be the third potential intervention.

Unorganized Market: Just 20% of milk was purchased by individual dairies and dairy cooperatives; the remaining 32% was sold to unorganized buyers. Up to 2022-2023, the government wants half of the milk to come from the organized sector. Value-adding animal products to extend their shelf life and boost profits is another potential solution.

Feed and Fodder shortage: India has shortages in three areas: concentrate feed (28 percent), green fodder (35 percent), and dry fodder (11 percent). Green and dry fodder deficits by 2025 will be 65 percent and 25 percent, respectively. Restructuring the land use plan is necessary to increase the total amount of cultivable land used for the production of fodder to at least 10%. By 2030, there will be about 250 ACU in the animal population, according to IGFRI.

Conclusion

The structural change in the agriculture industry that has been occurring for the past ten years is finally being acknowledged by stakeholders. The agriculture industry's new growth engine is cattle. Producing, adding value, and exporting dairy, fishery, poultry, and other goods are all made possible by the animal industry. Sustainable manufacturing is being impeded by certain hurdles in addition to performance issues. In order to enhance farmers' income, accomplish sustainable development goals, and seize global market opportunities, we must overcome these obstacles and guarantee the nutritional security of the population.

