

## Growth Trends and Instability in Maharashtra's Livestock and Poultry Sector: Analysis and Policy Pathways

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### Abstract

The study examines the growth trends, instability, and percentage changes within Maharashtra's livestock and poultry sectors using Maharashtra Livestock Census data from 1982 to 2019. The poultry sector achieved the highest growth, with a CAGR of 17.94%, while cattle populations declined by 1.78%, reflecting challenges in choice of breed, market access, infrastructure and disease management. Variations across regions like Marathwada and Vidarbha highlight disparities driven by water scarcity and fodder availability, underscoring the need for targeted policies to support resilient rural development and sustainable growth under Maharashtra's Vision 2025.

### Introduction

Maharashtra plays a pivotal role in agricultural and allied sectors contributing 12.1% share in the Gross State Value Added (GSVA) supporting the livelihoods of millions of rural households and smallholder farmers, underscoring its social and economic importance (Economic Survey of Maharashtra, 2022-23). The state ranks seventh in livestock with a population of approximately 3.3 crore and fifth in poultry, with around 7.43 crore poultry birds (Department of Animal Husbandry, Government of Maharashtra). Over recent years, Maharashtra has experienced substantial growth in both livestock and poultry sectors, driven by factors like rising demand for animal protein, advancements in veterinary services, and improved animal husbandry practices. The state is the largest producer of meat with 12.6% share, while poultry meat production has seen an impressive growth rate of 18% over last three decades, underscoring the sector's upward trajectory. Despite these positive trends, the sector grapples with several challenges, including market instability, disease outbreaks, and climate vulnerability, all of which impact productivity and profitability, particularly for smallholder

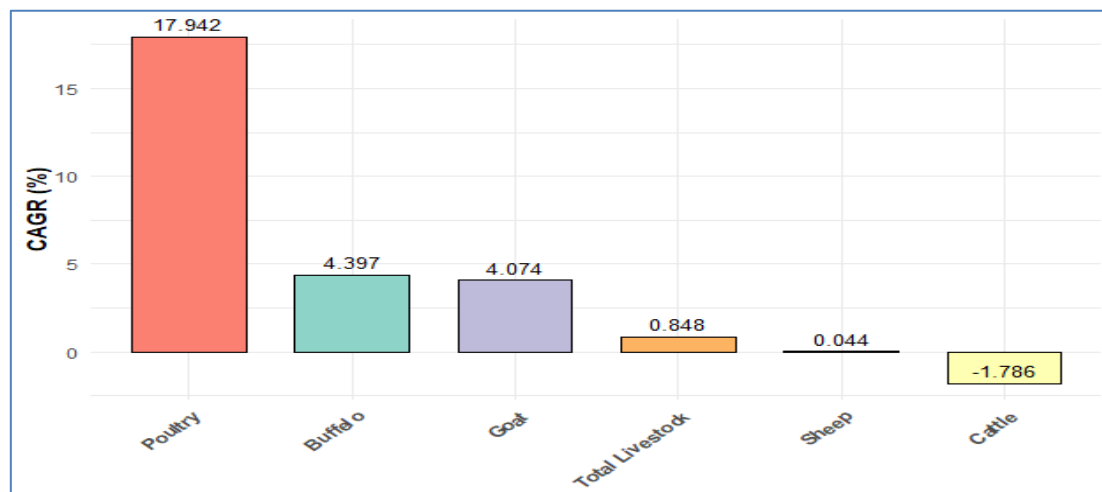
farmers. Additionally, regional disparities in the growth rates of different livestock categories, such as cattle, buffaloes, and poultry, indicate a need for targeted interventions to foster balanced and sustainable development across the sector.

This paper aims to analyze the growth trends, instability, and percentage changes within Maharashtra's livestock and poultry sectors, utilizing quinquennial data from the Maharashtra Livestock Census spanning from 1982 to 2019, covering the 13<sup>th</sup> to the 20<sup>th</sup> census. By exploring diverse growth trajectories and identifying underlying challenges, this study seeks to provide valuable insights and recommendations for policymakers, aligning with the Maharashtra government's Vision 2025 initiative, which emphasizes rural development and economic resilience. The analysis will focus on significant changes in livestock populations, production patterns, and sectoral dynamics over the decades. These insights will support future growth, enhance productivity, and ensure the well-being of rural communities dependent on livestock and poultry farming.

### **Growth and Instability trends**

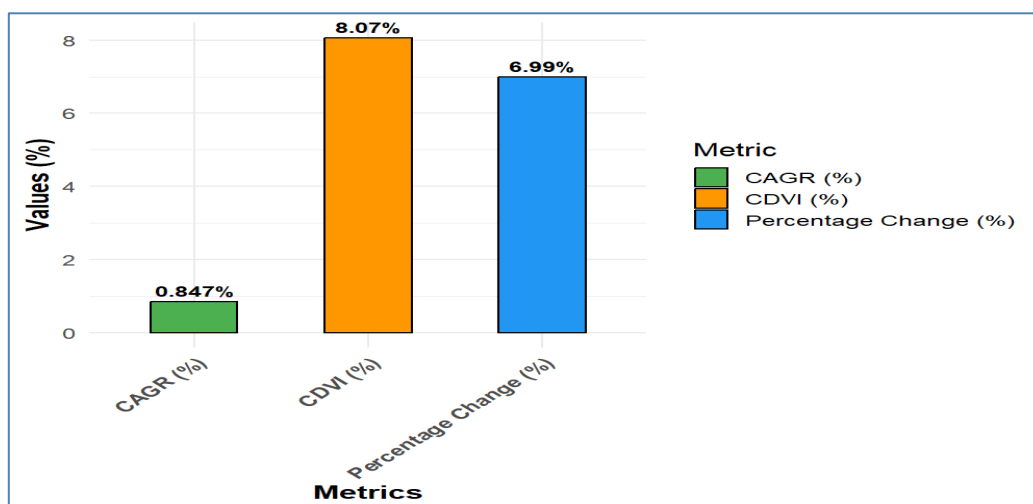
The analysis of Compound Annual Growth Rate (CAGR) in Maharashtra's livestock and poultry sectors, based on the Maharashtra Livestock Census data, shows varied growth trends that highlight both opportunities and challenges (Figure 1). The poultry sector experienced the highest growth with a CAGR of 17.942%, driven by rising consumer demand for poultry products, enhanced poultry farming practices, and modernized poultry units. However, the total poultry population in the state has decreased by 4.49%, whereas commercial poultry has declined by 13.44 % over the last census. Buffalo and goat sectors followed with moderate CAGRs of 4.397% and 4.074%, respectively, reflecting a steady rise in demand for milk and meat, especially in rural regions. This growth can be partly attributed to the National Livestock Mission, which has helped connect the unorganized sector's produce with organized markets through the creation of forward linkages. In contrast, the overall livestock sector, including sheep and cattle, recorded minimal to negative growth. Total livestock CAGR was only 0.848%, with sheep showing a marginal growth rate of 0.044% and cattle facing a decline at -1.786%. The total cattle population is 139.92 Lakh, reflecting a decrease of 9.63 % compared to the previous census. This indicates challenges faced by these sectors, such as inadequate infrastructure, farm mechanization and ban on bullock racing in the state. However, the proportion of exotic crossbred cattle within the total population increased significantly,

rising from 23.59% in 2012 to 32.93% in 2019 showing the growing preference for foreign breeds.



**Figure 1. Compound Annual Growth rate (CAGR) of different livestock and poultry sectors from 1982 to 2019 in Maharashtra**

The analysis of CAGR and CDVI for the total livestock sector in Maharashtra reveals a mixed picture of growth and stability as depicted in Figure 2. While the sector exhibited a moderate CAGR of 0.847%, indicating steady growth, it also experienced significant instability as reflected by a high CDVI of 8.07%. This suggests that the sector is susceptible to fluctuations, potentially due to factors like price volatility, disease outbreaks, and climatic shocks. This contrast in sectoral growth underscores an urgent need for policies that support high-growth sectors, such as poultry and buffalo, while implementing resilience measures for cattle and sheep farming. Factors such as water scarcity, recurrent droughts, and limited fodder resources in arid regions like Marathwada and Vidarbha have hindered cattle and sheep population growth. The Government of Maharashtra (GoM), in partnership with the National Dairy Development Board (NDDB) and Mother Dairy Fruit & Vegetable Pvt. Ltd., has launched a special initiative aimed at boosting milk production across 11 districts in Vidarbha and Marathwada. The project focuses on enhancing fodder development, providing high-quality cattle feed, supplying cattle feed supplements (mineral mixtures), and offering veterinary services, including doorstep artificial insemination (AI) services. In 2021-22, NDDB collected a substantial 619 lakh liters of milk (averaging 2,45,132 liters daily) through 1,885 milk collection centers, engaging 27,117 villagers.



**Figure 2. Compound Annual Growth Rate, Cuddy-Della Valle Index (CDVI) and percentage change (%) in the overall livestock sector of Maharashtra from 1982 to 2019**

**Conclusions and Way forward**

To address the disparities in growth trends and challenges faced by Maharashtra's livestock and poultry sector, policy interventions are crucial. The poultry sector, with its robust growth, requires continued support for infrastructure development, market access, and technical support to have sustainable and persistent source of income. For the buffalo, cattle and goat sectors, policies should focus on promoting feed and fodder improvement, skill development, technology transfer, extension activities for socially and economically backward classes and finally developing value-added products for employment generation and entrepreneurship development (Kumar *et al.*, 2021). The overall livestock sector needs investments in research and development and sustainable practices to enhance per animal productivity. Targeted programs focusing on fodder management, genetic improvement, and climate adaptation strategies could enhance the productivity and profitability of Maharashtra's livestock industry. To enhance the sector's stability, policies should focus on risk mitigation strategies, such as insurance and diversification, and on improving market access and infrastructure. State animal husbandry departments should ensure essential medicines and vaccines are available to livestock owners to lower treatment costs and support animal health and productivity (Das, 2022). Additionally, empowering women, and leveraging digital technologies can further enhance the sector's resilience. By implementing these policies, Maharashtra can foster prosperous and sustainable livestock and poultry sector, contributing to food security, rural livelihoods, and economic growth.

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