

An Empirical Study of Factors' Driving Livestock Production and Associated Marketing Problems in Western Maharashtra

Dr. Meghraj B Barbole¹, Dr. Rupesh A Pawar², Mr. Vijay Anandrao Kankekar³,

¹Assistant Professor, JSPM'S Narhe Technical Campus, Pune

²Assistant Professor, SaiBalaji International Institute of Management Sciences, Pune.

³Research Scholar, Department of Economics, Shivaji University, Kolhapur.

ABSTRACT

Livestock production forms an essential part of the agriculture, particularly in developing and underdeveloped countries. The researchers have mainly focused on the various key factors to expansion, major challenges, several problems, various skill-sets required for the expansion of livestock production in Western Maharashtra. The study has also highlighted on the perceived profitability and needed improvements in livestock production and marketing in Western Maharashtra. Researchers have selected Western Maharashtra as the study area and used Taro Yamane's Sample Size determination method for selecting of samples and samples were distributed among the districts such as Kolhapur, Pune, Satara, Sangli and Solapur by the using of proportionate sampling method, in accordance with their respective population size. The random sample selection method has used for selection of sample. This research study was purely based on the primary data which was collected by self-structured questionnaire and personal interview. Researchers have found that various factors were influencing the livestock production of which the continuously increasing the demand for animal products, better veterinary services, socio-economic importance, breeding improvement, nutrition was the major influential factors. the financial and record-keeping skills, planning and managing livestock, knowledge of animal husbandry and marketing skills were very much required skill-sets in livestock production and marketing in Western Maharashtra. The majority of selected respondents perceived livestock production as moderately profitable. Researchers have suggested to develop the infrastructure, proactive role of government required, adoption of farm-mechanization, minimize the cost of production, strengthening of cooperatives institutes, ensure credit and insurance access and promote training and awareness among the livestock producer and marketers in Western Maharashtra. The study concluded that livestock production helps to boost socio-economic condition of rural people and acts as "living bank" that helps to farmers cope with crop failures, droughts and financial emergencies. In recent years, the perception, attitude and outlook of youth towards livestock production have undergone a notable transformation.

Keywords: Livestock marketing, livestock production, livestock practices.

Introduction:

Livestock production is an integral component of the agriculture sector, particularly in developing countries and underdeveloped countries, where it plays an important and very crucial role in the sustaining the rural livelihoods as well as provides the employability, provides the regular income to millions of rural households, significantly contributing in the agriculture GDP and rural income, strengthens rural households financial stability, combating the malnutrition, serves as living assets, acts as buffer against the agriculture risks and income shocks, supply the draught power, organic manure, empower the rural women, develop the entrepreneurship skills, contribute to export

earnings and provides the sustainable benefits. Therefore, livestock sector plays an important role in growth and development of agriculture sector and rural community. Today, perception towards the livestock production is totally changed due to shift from subsistence to commercial farming, continually improved the technology related to breeding, veterinary service, mechanization and digital tools, continuously rising the demand of animal-based products, offers the higher and more regular returns, government support as well as education, training and skill development also plays an important and very significant role in the livestock production. Now a day in India, rural aspirations have undergone a significant transformation in recent years due to technological

advancement, expanding the market opportunities and economic restructuring. With the increasing the exposure, awareness, education and training, rural aspirants shifted to entrepreneurship, income security and dignified self-employment.

In this changing scenario, livestock production has emerged as very viable and preferred livelihood option that closely aligned with new rural aspirants. The livestock sector offers various opportunities related to value addition, commercial production and market integration. Here, perception and attitude towards the livestock sector is basically based on the institutional support, development of agriculture sector, infrastructure development, viability of food-processing units, credit facilities, cooperative networks, recent developed technology, farm-mechanization, market demand, pricing policy of livestock products, confidence among the rural youth and farmers.

Review Of Literature:

Livestock production plays an important and very significant role in the Farmers; livelihood in Western Maharashtra by contributing income, risk mitigation, employment generation, manure, nutrition and social status, thereby supporting in sustainable socio-economic development (*Biradar, N., Desai, M., Manjunath, & Doddamani, M.T., 2013*). The study analyzes growth and instability in livestock and poultry populations in India and Maharashtra during the period of 1961-2019 and finding out rapidly increasing the poultry birds, moderately increasing the buffalos. This study also found that higher population instability in Maharashtra and suggested that region-specific policies to improve the sustainability, resilience and farmers' Income (*Navyasree, P., Paul, N.C., Kumar, K.R., Nangare, D.D., Reddy, K.S., 2025*). The study found that hatta sale method and inadequate market facilities were the major constraints faced by cattle sellers and buyers in Beed (*Thombre, V.S., Shelke, R.D., & Ingle, A.B.*). The study found livestock farming evolving through the recent developed advancements in technology and livestock practices while facing challenges like market risk and environmental concerns, future growth depends on sustainability practices, precision technologies, innovation to ensure resilience and productivity

(*Anubha, 2024*). The study found livestock market in South Asia are rapidly expanding due to rising demand. But it remained unorganized and largely traditional. There is need of required balanced regulatory and market strategies to ensure food safety, suitability of rural livelihood and quality of supply (*Staal, S.J., 2015*).

Research Questions of Present Research Study:

These are given below.

- What are the key factors contributing to the expansion of the livestock production in Western Maharashtra?
- Which are the major challenges facing by the livestock producer in Western Maharashtra?
- Which is the market-related problems facing by the livestock producer in Western Maharashtra?
- What are the skill sets required for the expansion of livestock production in Western Maharashtra?

Scope of Present Research Study:

The livestock production plays a significant role socio-economic development of people living in Western Maharashtra. Here, researchers have tried to explore the various key factors and components that contributing to the expansion of the livestock production as well as find out the current challenges facing in livestock production by livestock producer in selected sample area. This research study also tried to examine the various marketing related problems facing by livestock producer and tried to evaluate the skill sets required for sustainable livestock production in Western Maharashtra.

Objectives:

- To explore the key factors contributing to the expansion of the livestock production.
- To find out the major challenges faced by livestock producer in livestock practices.
- To examine the various market-related problems affecting the livestock producer.
- To assess the various skill sets required for sustainable livestock production and marketing among livestock producer.

Hypothesis:

Hypothesis First:

H₀: There is no significant difference in respondents' perception regarding the key determinants 'of livestock growth in Western Maharashtra.

H₁: There is no significant difference in respondents' perception regarding the key determinants of livestock growth in Western Maharashtra.

Hypothesis Second:

H₀: There is no significant difference in the distribution of skill-sets required for improvement in livestock production; all skill-sets are equally required by livestock producer.

H₁: There is no significant difference in the distribution of skill-sets required for improvement in livestock production; all skill-sets are equally required by livestock producer.

Research Methodology:

Here, researchers have used descriptive study in order to describes the current status of livestock production practices, identifies challenges, problems and skill gaps. Researchers have selected Western Maharashtra as the study area. As the

population of the research study area is known, the researchers have adopted Taro Yamane's Sample Size determination method for selecting the sample. The total sample size thus determined was distributed among the selected districts such as Kolhapur, Pune, Satara, Sangli and Solapur by the using of proportionate sampling method, in accordance with their respective population size. Here, researchers have used random sampling method for selection of samples from selected research area. This research study is purely based on the primary data that was collected by self-structured questionnaire and personal interview method of livestock producer in sample area.

Data Analysis and Interpretation:

1. Factors And Key Determinants of Livestock Growth in Western Maharashtra (2025)

The study has focused on the various factors and key determinants of livestock growth in Western Maharashtra in 2025. In this study, various factors have taken into consideration and examine their role into growth of livestock in Western Maharashtra. The collected respondents' response on following given factors and key determinants in Western Maharashtra.

Table No:01- Factors and Key Determinants of Livestock Growth in Western Maharashtra (2025)

Particular	Yes	%	No	Percent
Availability of Transport	394	98.5	6	1.5
Better Feed Nutrition	396	99	4	1.0
Conducive Climate and Environmental Conditions for Livestock Production	392	98	8	2.0
Government Support	363	90.7	37	9.3
High Market Value	389	97.2	11	2.8
Improved The Breeding	395	98.7	5	1.3
Improved The Veterinary Care	398	99.5	2	0.5
Income Source	394	98.5	6	1.5
Integrated Farming Systems	378	94.5	22	5.5
Part Of Tradition, Ceremonies and Social Status	399	99.7	1	0.3
Reliable Source Of The Food And Income	397	99.2	3	0.8
Rising Demand For Animal-Based Products	393	98.25	7	1.8
Use Of Marginal Lands	387	96.7	13	3.3
Increased skill, knowledge, perception and approach towards the livestock	388	97.0	12	3.0

Source: Field Survey, 2025.

Table no 01 focuses on various factors and key determinants of livestock growth in Western Maharashtra in 2025. The chi-square test is used in order to test whether respondents' perception significantly differ from an expected distribution. Here, researchers have selected 400 respondents of which observed frequencies show very high "Yes" responses (90-99 percent) across all factors. The

calculated X^2 value becomes very larger because the observed frequencies deviate greatly from the expected equal distribution. The study found that factors such as demand for animal products, veterinary care, socio-cultural importance, breeding improvement, nutrition are strongly perceived as influential. These are confirming their critical role in livestock sector growth in Western Maharashtra.

2. Respondents Response on The Skill-Sets Required for Improvement in Livestock Production and Marketing (2025)

Table No: 2 Skill-Sets Required for Improvement in Livestock Production (2025)		
Particular	Total	Percentage
Knowledge related to Animal Husbandry	51	12.8
Communication And Networking Skills	26	6.5
Financial And Record-Keeping Skills	101	25.3
Leadership And Problem-Solving	30	7.5
Marketing Skills	50	12.5
Planning And Managing Livestock	105	26.3
Risk Management Skills	8	2.0
Time-Management and Labour Handling	29	7.3

Source: Field Survey, 2025.

Table no 2 indicates the respondents' response on the skill-sets required for improvement in livestock production in Western Maharashtra in 2025. The study found that the majority of the selected respondents reported that the most required skill set is planning and managing livestock (26.3 percent) and followed by the financial and record-keeping skills (25.3 percent), Knowledge related to animal husbandry (12.8 percent), Marketing Skills (12.5 percent), Leadership and Problem-solving (7.5 percent), time-management and labour handling (7.3 percent), communication and networking skills (6.5 percent) and risk management skills (2.0 percent) in Western Maharashtra.

3. Various Challenges in Livestock production and marketing in Western Maharashtra (2025)

The research study has tried to find out various challenges in livestock production and marketing in Western Maharashtra in order to enhance the productivity and efficiency, reducing the marketing inefficiency, ensuring the sustainable livestock development, promoting rural entrepreneurship and employment, improving farmers' income and livelihood, achieving food and nutritional security. Therefore, researchers have tried to examine various challenges in livestock production and marketing in sample area at given time period.

Table No: 03 Challenges in Livestock Production and Marketing in Western Maharashtra (2025)					
Sr. No	Particular	Yes	Percent	No	Percent
1	Price Volatility	371	92.8	29	7.3
2	Fluctuating Market Condition	240	60.0	160	40.0
3	Intermediary Exploitation	344	86.0	56	14.0
4	Deficient Market Infrastructure	372	93.0	28	7.0
5	Limited Access to market information	363	90.8	37	9.3
6	Extended Distance to market centers	290	72.5	110	27.5

7	Lack of institutional support	371	92.8	29	7.3
8	Inadequate financial institutions availability	396	99.0	4	1.0
9	Seasonal And Festival-based demand patterns	377	94.3	23	5.8
10	Reduced Bargaining strength	368	92.0	32	8.0
11	Insufficient government assistance	356	89.0	44	11.0

Source: *Field Survey, 2025.*

Table no 03 indicates various challenges in livestock production and marketing in Western Maharashtra in 2025. The study found that majority of selected respondents were found inadequate financial institutions availability (99 percent) and followed by seasonal and festival-based demand patterns (94.3 percent), deficient market infrastructure (93 percent),

price volatility (92.8 percent), lack of institutional support (92.8 percent), limited access to market information (90.8 percent), insufficient government assistance (89.0 percent), intermediary exploitation (86.0 percent), extended distance to market centers (72.5 percent) and fluctuating market condition (60 percent) in Western Maharashtra in 2025.

4. Perceived Profitability of Livestock Production and Marketing Among Respondents In Western Maharashtra (2025)

Profitability	Frequency	Percent
Barely Profitable	2	0.5
Moderately Profitable	321	80.3
Highly Profitable	77	19.3
Grand Total	400	100.0

Source: *Field Survey, 2025.*

The study has focused on perceived profitability of livestock production and marketing among respondents in Western Maharashtra in 2025 in order to examine gaps between perception and reality, influence on adoption of improved practices, understand farmers' decision making, assessing the marketing constraints and risks, encouraging youth and entrepreneurship and regional and socio-economic insights in Western Maharashtra in 2025. Table no 04 indicates perceived profitability of livestock production and marketing among respondents in Western Maharashtra in 2025. The study found that the majority of selected respondents (80.3 percent) perceived livestock production as

moderately profitable and followed by highly Profitable (19.3 percent) and barely Profitable (0.5 percent) in Western Maharashtra in 2025.

5. Respondents' View on Needed Improvements in Livestock Marketing in Western Maharashtra (2025)

The study focused on the respondents' response on needed improvements in livestock marketing in Western Maharashtra in 2025 in order to find out the solution for enhance farmers income, identify marketing gaps, reduce the exploitation, promote the technology use, support policy formulation, improve livelihoods and address regional needs in selected sample area in 2025.

Improvements' Needed	Frequency	Percentage
Enhance Facilities and Infrastructure	393	98.3
Provision Of Direct Marketing Channels	369	92.3
Market Price Information Awareness	383	95.8

Development Of Cold Storage and Transportation Facilities	390	97.5
Active Government Support and Intervention	383	95.8
Implementation Of Digital Marketing Platform	391	97.8
Formation And Strengthening of Cooperatives	399	99.8
Organization of Markets Boost Livestock Trade	393	98.3
Transparent Pricing Aids Decision-Making	382	95.5
Better Transport Ensures Efficient Handling	392	98.0
Animal Health Management Improves Productivity	361	90.3
Standardize And Grade Livestock	377	94.3
Ensure Credit and Insurance Access	393	98.3
Promote Training and Awareness	400	100.0
Source: <i>Field Survey, 2025.</i>		

Table no 5 indicates respondents' response on needed improvements in livestock marketing in Western Maharashtra in 2025. The study found that the majority of selected respondents were needed to promote training and awareness (100 percent) and followed by the formation and strengthening of cooperatives (99.8 percent), enhance facilities and infrastructure (98.3 percent), organized markets boost livestock trade (98.3 percent), ensure credit and insurance (98.3 percent), market price information awareness (95.8 percent), better transport ensure efficient handling, implementation of digital marketing platform (97.8 percent), development of cold storage and transportation facilities (97.5 percent), active government support (95.8 percent), transparent pricing aids decision-making (95.5 percent), standardize and grade livestock (94.3 percent), provision of direct marketing channels (92.3 percent), and animal health management improves productivity (90.3 percent) in sample area in 2025.

Hypothesis Testing:

Hypothesis First:

H₀: There is no significant difference in respondents' perception regarding the key determinants 'of livestock growth in Western Maharashtra.

H₁: There is no significant difference in respondents' perception regarding the key determinants of livestock growth in Western Maharashtra.

Interpretation

The chi-square test is used in order to test whether respondents' perception significantly differ from an expected distribution. Here, researchers have selected 400 respondents of which observed frequencies show very high "Yes" responses (90-99 percent) across all factors. The calculated X^2 value becomes very larger because the observed frequencies deviate greatly from the expected equal distribution. The study found that factors such as demand for animal products, veterinary care, socio-cultural importance, breeding improvement, nutrition are strongly perceived as influential. These are confirming their critical role in livestock sector growth in Western Maharashtra.

Hypothesis Second:

H₀: there is no significant difference in the distribution of skill-sets required for improvement in livestock production; all skill-sets are equally required by livestock producer.

H₁: there is no significant difference in the distribution of skill-sets required for improvement in livestock production; all skill-sets are equally required by livestock producer.

Interpretation:

The chi-square test is applied in order to examine whether having significant difference of skill-sets required for improvement in livestock production; all skill-sets are equally required by livestock production in Western Maharashtra in 2025. In the

testing of hypothesis, there were 400 samples and number of skill-sets required (categories) are 8 so that expected frequency for each category $E = (400/8) = 50$. $df = k-1 = 8-1 = 7$. Table value is $\chi^2(0.05, 7df) = 14.07$. Here, $\chi^2_{calculated}(176.16) > \chi^2_{table}(14.07)$. There is a significant difference in the skill-sets required for improvement in livestock production and marketing. The study found that there is significance difference in the skill-sets required in livestock production and marketing in Western Maharashtra. The findings indicate that planning and managing livestock and financial record-keeping skills are provided as the most important, whereas risk management skills are given least important in the present research study.

Findings:

The study found that there were various factors influencing livestock production, of which the continuously increasing the demand for animal products, better veterinary services, socio-economic importance, breeding improvement, nutrition was the major influential factors. These are confirming their critical role in livestock sector growth in Western Maharashtra at given time. This study also found that financial and record-keeping skills, planning and managing livestock, knowledge related to animal husbandry and marketing skill are very much required skill-sets in livestock production and marketing in Western Maharashtra. In the Western Maharashtra, there were found various challenges in livestock production and marketing such as inadequate financial institutions availability and followed by seasonal and festival-based demand patterns, deficient market infrastructure, price volatility, lack of institutional support, limited access to market information, insufficient government assistance, intermediary exploitation, extended distance to market centers and fluctuating market condition. The study found that the majority of selected respondents perceived livestock production as moderately profitable and followed by highly Profitable and barely Profitable in Western Maharashtra in 2025.

Suggestions:

Researchers have given suggestion based on the present research study. These includes enhancing

infrastructure facilities, create market price information awareness, need proactive government support and intervention, formation and strengthening of cooperatives institutes, organization of markets boost livestock trade, transparent pricing aids decision-making, standardize and grade livestock, ensure credit and insurance access and promote training and awareness among the livestock producer and marketers in Western Maharashtra.

Conclusion:

Researchers have concluded that livestock production plays an important and very significant role in growth and development of Western Maharashtra which helps to generate employment opportunities to small, marginal farmers and landless labours and specially youths. This sector also acts as “living bank” that helps to farmers cope with crop failures, droughts and financial emergencies. This sector also supports to mixed farming system and very efficiently and optimally using the farm resources. In the rural area, malnutrition is prevalent, and livestock helps to provides high-quality proteins, vitamins and minerals through animal products. Livestock sector also boosts agribusiness and entrepreneurship through animal-based processing units such as dairy units, poultry units, meat processing and value addition units. Researchers also concluded that the majority of rural areas are well connected bu good road infrastructure to major cities such as Pune, Kolhapur, Sangli, Satara, Solapur, Ichalkaranji, Baramati and Karad. These major urban centers have a strong and growing demand for animal products, which significantly boosts livestock production, strengthens market linkages and contributes to overall rural development.

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