

PROBLEMS AND PROSPECTS OF ANIMAL HUSBANDRY IN SATARA DISTRICT: A GEOGRAPHICAL ANALYSIS

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Article Info	ABSTRACT
Article History: Received: 15th Dec 2025 Accepted: 19th Dec 2025 Published: 20th Dec 2025	Animal husbandry is the practice of raising animals for products such as milk, meat and fiber. This includes managing and caring of livestock and breeding, nutrition and production. The nation's GDP, agricultural stability, food security, and people's lives are all greatly impacted by animal husbandry. It plays an important role in the socio-economic structure of rural society. Besides, climatic regions effect on development of animal resources. Animal husbandry seems to have developed according to the respective climatic divisions. As the agricultural sectors develop according to the climate sector, the animal husbandry sector also develops. Different animals are reared according to the suitability of available climates all over the world. E.g. In India, buffalo, goat, poultry, cow etc. pet animals are reared. Animal husbandry is an important part of agriculture from ancient period. Domesticated animals must be raised and managed to meet human needs. Humans depend on animal husbandry for nutritional nutrition and economic revenue. In animal husbandry, special attention is given to animal breeding, reproduction, health, disease prevention and management, fodder management etc.
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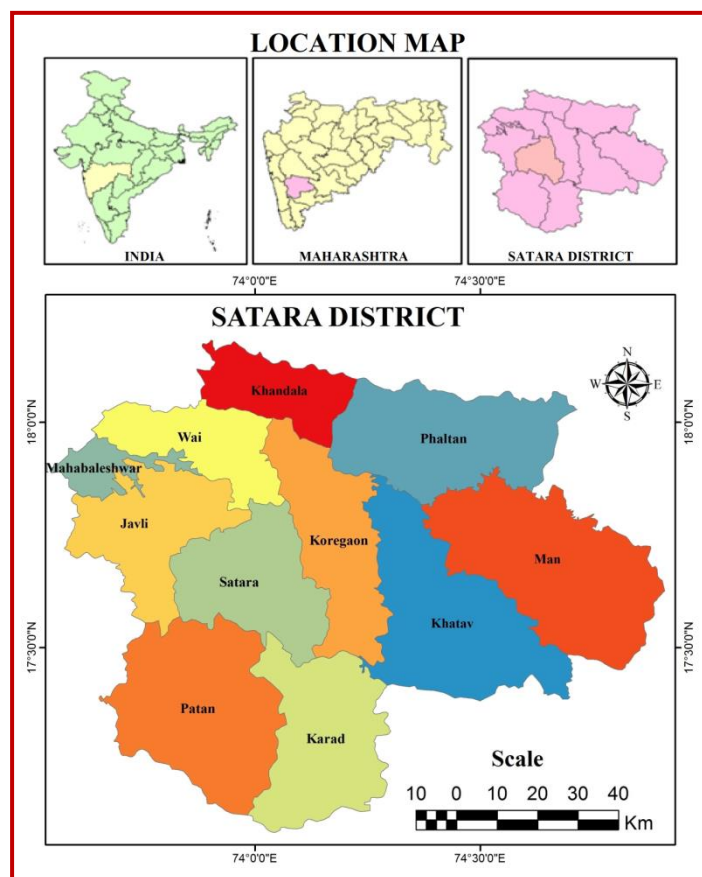
Introduction:

Farming, raising, and breeding are all parts of the complimentary industries of agriculture and animal husbandry. Agriculture and animal husbandry are both an interdependent businesses as organic fertilizers are required for good crop production from agriculture supplied by livestock. On the other hand, agriculture provides the nutrient food needed for raising cattle. Livestock helps smallholder farmers, landless labourers, and women gain employment and generating economic empowerment. Animal husbandry helps meet the needs of farmers such as milk, dairy products and meat, organic manure, domestic fuel, and products such as wool, skin, hair, etc. Indian society depends on agriculture and related industries for its livelihood. Human is depending on animal husbandry for nutritional nutrition and economic revenue. In animal husbandry, special attention is given to animal breeding, reproduction, health, disease prevention and management, fodder management etc. Recently climatic condition is affecting the animal husbandry business. Many times, due to the adverse weather conditions, problems such as deflection in crop productivity, problem of fodder for animals results in difficulties in the development of dairy industry. Besides, problem of drinking water, damage to crops due to rains, drought, epidemics of animals etc. affect on the development of dairy industry.

According to Indian Livestock Census 2019, livestock includes cattle, buffaloes, sheep, goats, pigs, horses, ponies, donkeys, camels, and mules. Livestock are classified as indigenous or crossbreed/hybrid based on age, sex, and origin. Many factors such as rainfall, temperature, humidity, soil, vegetation, availability of fodder have an effect on livestock development. But, crop production in rainfed rural areas is unstable, non-conservative and unproductive, so animal husbandry has to be given importance. Besides, agro-climatic condition is affected on livestock productivity and their health. Livestock (animal husbandry) plays an important role in the rural Indian economy. Animal husbandry is the most important economic activity in rural areas after agriculture.

STUDY AREA:

In western Maharashtra, Satara district is located on the Deccan Plateau's western edge. Satara District lies in the basin of River Krishna and Neera. Satara District extends from 17°50' North to 18°11' North latitude and 73°33' East to 74° 54' East longitude. It also has an east-to-west extension of 144 km and a north-to-south extension of about 120 km. Satara District is of compact shape. The entire area of Satara District, as determined by the 2011 census, is around 10,480 square kilometers, and 3.4% of Maharashtra's total land area. The districts of Pune in the north, Sangli in the southeast, Solapur in the northeast, Raigarh in the west, and Ratnagiri in the south are all geographically adjacent to Satara District. Satara District comprises 11 Tahsils and 4 administrative divisions, which include the Satara Tahsil, Wai, Jaoli, Khandala, Patan, Karad, Koregaon, Khatav, Man, and Mahabaleshwar. According to the 2011 census, 3,03,741 people living in the district. Total 2.67% of Maharashtra state's population lives in Satara District.



Satara district is experiences a monsoon type of climate. These climate is favouerable and healthy. Satara district is having glorious social, cultural and historical background. Satara district is also being consider as the socioeconomically most developed districts of Maharashtra state. According to census 2011, Satara district is a district of Maharashtra state in western India with an area of 10,480 s.q.k.m. and population is 3,003,741. The population density of district is 287 people per. Sq. km. whereas the sex ratio of district is 986. Total 10% of the population is under 6 years of age. There are the sex ratio is 966.

Satara district is very rich in case of animal population. The allied

activities of animal husbandry and dairy development play a very important role in the district. This leads to the availability of supplementary income besides providing additional employment. Livestock activity is gradually shifting towards dairy products with increasing income. Therefore, animal husbandry and dairying are dependent on each other. According to the Livestock Census 2019, the district has cattle, Buffalo, goats, and sheep and 39,04,265 poultry farms in the district.

OBJECTIVES:

The main objective of the present research work is to explain the study problems and prospects of animal husbandry in Satara District. However the specific objectives of present study as follow.

1. To study problems of animal husbandry in the study area.
2. To study prospects of animal husbandry in the study area.
3. To suggest few remedies to overcome animal husbandry problems in the study area.

DATA BASE & METHODOLOGY:

A systematic method has been used for the purpose of achieving the objectives of the present research. This research work is based on both primary and secondary data sources.

Primary Data:

For the present research work, the researcher has used the specific method of first collecting information and analyzing the collected data. Primary data has been collected using the effective methods of questionnaires, schedules & interviews. Besides, various geographical features of the study area have been recorded through observation. Some primary geographical information has been collected through field survey.

Information related to agriculture and livestock was collected through interviews with agricultural labourers, farmers, small land holders, poultry farm owners, veterinary doctors, dairy owners, and mutton, egg sellers and administrative officials. Primary data was collected through field surveys. The questionnaire format covers general land use, irrigation facilities, and agricultural practices, cropping practices, livestock information and socioeconomic factors.

Secondary Data

The secondary data mainly for livestock has been collected from various sources which include published and unpublished materials, reports from various offices/department such as District Gazetteers of Satara, District Census Handbook, Livestock Census, Socio-Economic Review and District statistical abstracts of Satara district, Topomap, Gram Panchayat, Panchayat Samiti, Zilha Parishad (ZP) Office, etc. Besides, various types of data have also been collected from books, journals, and website, etc.

In the present study cow, buffalo, sheep, goat, and poultry birds were selected and their indigenous and crossbreed species were considered. Animal husbandry data (cow, buffalo, goat, sheep, and poultry) has been studied in the period from 2007 to 2019. The standard cartographic technique has been used for analysis of the data. e.g. distribution maps, charts, bar graphs, etc.

LIVESTOCK (ANIMAL HUSBANDRY) OF SATARA DISTRICT:

Animal Husbandry Department of Zilla Parishad in Satara district, Maharashtra provides services for livestock. The department aims to increase productivity, protect livestock and provide income opportunities to farmers. Animal husbandry is an important supplementary occupation for the majority of people in Satara district. For many this supplementary occupation has become primary and Animal Husbandry Department of Zilla Parishad Satara helps in their progress through various schemes, medical treatment, fodder development and technical guidance. Veterinary Officers (Animal Husbandry Development Officers) and Livestock Supervisors provide continuous services through 171 hospitals run by the department. As a result, animal husbandry, buffalo rearing, poultry rearing, pig rearing, fodder development, dairying, silage production and related businesses have flourished with substantial contribution from the sector.

In Satara district, Livestock Development Officers (Extension) in 11 Panchayat Samitas guide the herdsmen for animal husbandry and promote various schemes. Hospitals under the Zilla Parishad provide essential veterinary services and preventive vaccinations through the heads of these institutions. Various schemes related to animal husbandry are implemented by the government and Zilla Parishad. Various training camps are organized in the district for livestock and production enhancement, as well as essential services are provided through field promotion camps at the village level. To provide health services to livestock through improved technology of animal husbandry and to implement personal benefit schemes of Animal Husbandry Department. To prepare the pastoralists to become livestock entrepreneurs and ensure economic and nutritional development in the district. This is the vision and mission of Animal Husbandry Department of Satara District. Animal Husbandry Department, Zilla Parishad Satara is the primary function of providing animal husbandry services to the animal husbandry in the district. This is achieved by implementing schemes and development

related schemes from district own funds through various institutions under the department.

Livestock Breeds of Satara District: 2025

In present, Satara district livestock density is 118 per sq.k.m., while village wise average livestock density is 706 per village. Livestock are domesticated animals that are raised with agriculture and produce various products such as meat, eggs, milk, leather, and wool. Livestock has a tradition in the study area. Both Indigenous and crossbreed breeds are found.

Table No 1.1: Livestock Breeds of Satara District

Sr. No.	Livestock	Indigenous	Crossbreed
1	Buffaloes	Pandarpuri, Gavlat, Khadaki	Jaffrabadi, Surti, Meshana, Murrah, Nili Ravi, Medha, Bhadawari.
2	Cattle	Khillar, Deoni, Krishna Valley, Red Khandari, Red Sindhi, Dangi	Jersey, Holstein, Friesian, Brown Swiss, Ayrshire.
3	Goats	Osmanabadi, Jamunapari, Betal, Barbari and Sironi,	Alpine, Anglo-Nubian Angora, Boer, Saanen
4	Sheep	Deccani, Bellary, Mundy, Hassan	Merino, Dorset, Suffolk, Southdown.
5	Poultry	Khadki, Leghorn, Vanraj, Sindhi, and Busra.	Kadaknath, Kari Priya layer, Upacari Caribu-Vishal, Asil, Chittagong, Kadkanath, Kari Shyama.

Source: District Animal Husbandry Department, Satara, 2025

As per above table no. 1.1 show, livestock like cattle, buffaloes, goats, sheep, and poultry etc. are reared in Satara district. Three to four decades ago, the number of hybrid animals in Satara district was less. However, in recent times, due to the preference for breeding hybrid breeds, the number of better quality livestock is increasing. Buffalo species such as Pandharpuri, Galwat, and Khadki are found throughout the study area. New high yielding buffaloes like Murha, Mahisana, Jafarabadi and Surti etc. crossbreed breeds of buffaloes that give high milk are reared in the study area. Khillar, Dangi, Devni, Krishna Valley, Sahiwal etc. indigenous breeds of cattle, and Jersey, Holstein, and Friesian etc. crossbreed cattle found in the study area. The indigenous breeds of Osmanabadi, Jamunapari, Betal, Barbari, and Sironi goats are found throughout the study area, but the number of crossbreed breeds of sheep is less. Deccani, Bellary, and Mundy are the local breeds of sheep found in the central-eastern part of the study area. Indigenous hen breeds like Gawran, Vanraj, Sindhi, and Busra found in the study area. However, Kari Priya layer, Upacari Caribu-Vishal, Asil, Chittagong, Kadkanath, Kari Shyama, and other crossbreed breeds of hen are found.

Livestock Distribution of Satara District:

There is a huge scope for animal husbandry in Satara district. Therefore, it is helping to raise the economic level of the people living in the rural areas of Satara district. Likewise, growth of animal husbandry can take place through the special efforts of

women in the said region.

Table No 1.2: Distribution of Livestock in Satara District: 2007 to 2019

Livestock	Livestock 2007		Livestock 2012		Livestock 2019	
	Number	Percent	Number	Percent	Number	Percent
Cattle	3,59,057	8.28	3,77,262	9.83	3,52,436	5.54
Buffaloes	347155	8.01	3,52,844	9.20	3,26,896	5.13
Sheep	311623	7.19	2,64,221	6.89	1,85,905	2.92
Goats	391173	9.02	3,09,011	8.05	3,64,348	5.72
Pigs	NA	NA	4,451	0.12	313	0.00
Horses/Ponies	1945	0.04	1,843	0.05	757	0.01
Donkey	1590	0.04	1,558	0.04	767	0.01
Poultry	15,09,356	34.82	12,12,654	31.64	39,04,265	61.31
Total	14,12,543	100.00	13,11,190	100.00	12,31,422	100.00

Source: Livestock Population Census 2007, 2019.

According to the 2007 livestock census, a total of 14,12,543 livestock is found in the study region. However, as per livestock census 2012, there are total 13,11,190 livestock is found. According to the livestock census 2019, there are total 12,31,422 livestock in the study area. In terms of the dairy industry, the number of cattle is the highest and then comes the order of buffalo livestock. There are the total number of cattle is 3,52,436 the buffaloes are 3,26,896, the goats are 3,64,338 (5.72%), sheep are 185905 while the pigs are 313 found in the study area. However, total population of poultry birds is 39,04,265. In the area of study, horses and ponies, pigs, and donkeys are less livestock. The rate of change in the livestock population of 2019 compared to 2007 livestock in the district is -1.81% which indicates a negative increase in the rate of livestock change. The negative growth of change in livestock increase in the district is a matter of concern in terms of livestock development. There has been a fluctuation in livestock growth in Satara district.

Tahsil-wise Livestock Distribution of Satara District:

There is variation in livestock distribution across tahsils in Satara district. In the western hilly areas of the district, livestock is sparse while in some tahsil in the east, livestock is more abundant despite higher temperature. Tahsil wise distribution of livestock in Satara district is as follows.

Table No. 1.3: Tahsilwise Livestock Distribution, 2007

Sr. No.	Tahsil	Livestock						
		Cattle	Buffalo	Sheep	Goat	Pig	Poultry	Total
1	M'shwar	5,493	2,668	13	928	NA	13,579	9,102
2	Wai	27,814	17,780	10,328	17,543	NA	81,740	73,465
3	Khandala	18,861	6,169	27,374	19,120	NA	78,670	71,524
4	Phaltan	67,888	18,526	1,19,798	80,933	NA	2,00,165	2,87,145
5	Man	36,784	19,921	72,063	66,501	NA	1,54,439	1,95,269
6	Khatav	39,084	52,816	30,077	65,339	NA	1,70,751	1,87,316
7	Koregaon	31,757	25,551	18,630	26,234	NA	1,34,583	1,02,172

8	Satara	34,463	40,590	8,398	27,245	NA	1,88,973	1,10,696
9	Jaoli	20,741	18,219	2,116	8,777	NA	48,812	49,853
10	Patan	35,409	54,400	3,587	35,860	NA	1,55,211	1,29,256
11	Karad	40,763	90,515	19,239	46,228	NA	2,82,423	1,96,745
Total		3,59,057	3,47,155	3,11,623	3,94,708	NA	15,09,356	14,12,543

Source: Livestock Population Census 2007.

Table No. 1.4: Tahsilwise Livestock Distribution, 2019

Sr. No.	Tahsil	Livestock						
		Cattle	Buffalo	Sheep	Goat	Pig	Poultry	Total
1	M'shwar	6,835	3,273	3,499	1,731	00	37,131	15,338
2	Wai	20,185	15,889	5,558	17,588	07	6,14,507	59,227
3	Khandal a	24,825	8,047	30,213	20,218	100	7,34,797	83,403
4	Phaltan	98,364	16,898	47,089	85,486	53	5,95,098	2,47,890
5	Man	48,763	35,252	55,008	89,992	95	3,00,307	2,29,110
6	Khatav	35,555	56,077	14,775	45,904	15	3,72,767	1,52,326
7	Koregaon	28,503	27,640	10,554	23,362	06	2,32,143	90,065
8	Satara	22,884	33,405	4,505	21,590	10	2,82,237	82,394
9	Jaoli	9,149	8,319	215	6,310	00	2,26,960	23,993
10	Patan	22,677	52,663	2,097	22,694	00	2,83,376	1,00,131
11	Karad	34,696	69,433	12,392	30,997	27	2,24,942	1,47,545
Total		3,52,436	3,26,896	1,85,905	3,65,872	313	39,04,265	12,31,422

Source: Livestock Population Census 2019.

Table no. 1.3 and table no. 1.4 shows that there is a difference between tehsil-wise livestock distribution in 2007 and tehsil-wise livestock distribution in 2019. Livestock in Satara district includes cows, buffaloes, sheep, goats, pigs and poultry. Besides, cows, buffaloes, goats, sheep, pigs, chickens are reared. Phaltan, Karad, Man talukas have the highest number of livestock, while the hilly areas of Mahabaleshwar, Jaoli have the lowest distribution of livestock. Moderate distribution of livestock is found in Koregaon, Satara, Patan, Khatav tahsils. As per livestock census 2019, the number of livestock in Satara district is decreasing day by day.

PROBLEMS AND PROSPECTS OF ANIMAL HUSBANDRY IN SATARA DISTRICT:

Animal husbandry in Satara district of Maharashtra faces problems like quality fodder, drought and disease control. Animal husbandry in Satara district faces many problems, including such as disease, inadequate infrastructure, poor access to credit, poor quality breeding stock, lack of vaccines, lack of quality fodder, drought, land degradation, feed scarcity, marketing and distribution, etc. Many such animal husbandry problems are experienced in Satara district. It is necessary to take a comprehensive look at the problems related to animal husbandry. There is need to review these problems

comprehensively.

Problems of Animal Husbandry in Satara District

Animal Husbandry is a crucial component of the rural economy in Satara district, Maharashtra, serving as a significant source of livelihood, particularly dairy farming. The sector faces several hurdles but also presents substantial opportunities for growth and economic upliftment. The primary challenges for livestock farmers in Satara, especially dairy farmers, revolve around knowledge, infrastructure, and resource access:

1) Lack of Technical Knowledge: A significant proportion of farmers lack scientific knowledge regarding modern feeding practices and better management conditions necessary to maximize the productivity of crossbred cattle. Many still rely on traditional methods.

2) Low Productivity of Cows: Directly linked to poor management and lack of knowledge, a high percentage of cows, particularly crossbred varieties, exhibit low milk yield/productivity.

3) Inadequate Veterinary Services: Many areas face a shortage of timely and sufficient veterinary services, including prompt medical treatment and access to regular vaccination programs.

4) Water Scarcity and Fodder Shortage: The district has diverse climatic zones, with eastern parts being drought-prone. This leads to a persistent problem of water scarcity for animals and a shortage of adequate green and dry fodder, particularly during the summer.

5) Financial and Marketing Constraints: Difficulty in obtaining loans for scaling up or modernizing operations. Issues with in-time payment for the sale of milk. Lack of awareness about various government schemes and facilities.

Prospects of Animal Husbandry in Satara District:

Despite the problems, the sector has strong underlying potential and opportunities for development:

1) Economic Importance and Market Demand: Livestock is a leading property and a vital part of the district's economy. There is an increasing demand for animal products (milk, meat, eggs) driven by urbanization and rising incomes (the "Livestock Revolution"), providing a ready market.

2) Government Support and Schemes: The Animal Husbandry Department of Zilla Parishad, Satara, and the State Government are actively promoting development through various schemes:

i) Genetic Improvement: Focus on schemes like the Innovative Scheme (Sex-Sorted Semen) to produce a higher percentage of female calves (up to 90%), which increases the future milk-producing population.

ii) Distribution Schemes: Providing subsidies for the distribution of milch animal groups (cows/buffaloes) and goat/poultry groups (e.g., Talanga Group) to uplift rural communities and beneficiaries, especially those from Scheduled Castes/Neo-Buddhists.

iii) Health and Extension Services: Organization of various camps such as Infertility Eradication, Deworming, and Ectoparasite Eradication Camps, along with Animal Husbandry Training Programs.

3) Integration with Agriculture: Animal husbandry is a traditional allied activity to

agriculture, providing supplementary income, especially to small and marginal farmers who have limited land for cropping. Livestock provides draft power and valuable farm yard manure (FYM).

4) Dairy Development: The presence of milk processing units and a historical background of dairy husbandry provide established infrastructure for the dairy business. Investment in modernizing this chain is a strong prospect.

5) Geographical Advantage: Areas with moderate rainfall, agricultural prosperity (like Phaltan taluka), and good transport facilities are conducive to supporting a large livestock population.

To fully exploit these prospects, there needs to be an emphasis on technology transfer, increasing farmer competencies through training, and improving the reach and efficiency of veterinary and financial services.

CONCLUSION:

Changing climatic conditions, insufficient and erratic rainfall, drought, lack of adequate fodder for animals, rising prices of fodder and financial loss from livestock to farmers are all affecting livestock growth and development. Observations show that temperature, rainfall, topography, heat stress, soil, cropping pattern, natural vegetation, relative humidity, and solar radiation influence the growth and distribution of livestock. The rainfall (93%), topography (90%), temperature (83%), soil (83%), and cropping system (77%) effects on livestock. These factors affect the health, production, and reproductive capacity of livestock. Livestock production encompasses milk, meat, wool, and egg production. Among these, climatic conditions have the greatest influence on milk production (92%) and egg production (86%). The climatic condition seems to affect the health of the livestock. Generally, leptospirosis, salmonellosis, diarrhoea due to lack of food and water (73.70%) in livestock, enterotoxaemia due to foodborne disease (70.00%), viral and bacterial diseases (74.07%), and vector-borne disease (72.22%) anthrax, foot rot, diseases like salmonellosis are transmitted to animals. High temperatures, and heavy rainfall, affect livestock production and development.

SUGGESTIONS:

It is must be given importance to make efforts at the government level to reduce the problems of animal husbandry in Satara district. It is essential to provide training and guidance to farmers from time to time regarding breeding, maintenance, and management of crossbreed animals as well as indigenous animals. Subsidies should be given to farmers for constructing climate resilient shed for better production and management of animals. Livestock needs to increase in terms of livestock growth and development. Nutritional deficiency is a major cause of reproductive disorders, so livestock owners should be well aware to prepare balanced nutrition for their livestock at low cost. Farmers should prepare green fodder to feed animals to reduce reproductive diseases as much as possible. Moreover, timely examination of animals by qualified veterinarians is essential to reduce various reproductive diseases. The District Animal Husbandry Department should make most of the important drugs and vaccines available to the livestock owners to reduce the cost of treatment and to maintain the health and production of the livestock. All Animal Health Centers/Dispensaries should ensure availability of most important medicines for livestock keepers especially antibiotic, antipyretic, antihistaminic,

anthelmintic, mineral and vitamin supplements and vaccines to maintain livestock health and production.

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