International Journal of Multidisciplinary Research and Development
www.allsubjectjournal.com
ISSN Online: 2349-4182
Received: 28-12-2025, Accepted: 27-01-2026, Published: 11-02-2026
Volume 13, Issue 1, 2026, Page No. 356-360

An insight into agriculture and animal husbandry as two major sectors contributing to the rural economy with special reference to Saswad in Pune Region

Sarvesh N Gawade, Murtaza A K Chakkiwala, Sakshi Uday Naik, Sonali Joshi
KJEIs Trinity Institute of Management and Research, Pune, Maharashtra, India

Abstract
Agriculture and animal husbandry still remain the backbone of rural economies in many low- and middle-income regions of India, with special mention to Maharashtra. This paper examines the economic, social, and livelihood contributions of these two interrelated sectors, explores their complementarities and differences, identifies main challenges (environmental, structural, and institutional), and proposes certain steps to strengthen their role in sustainable rural development. Using a mixed-methods approach—synthesizing secondary literature, sector reports, and examples from village-level studies, this paper highlights how integrated agricultural/livestock systems support employment, income diversification, food and nutritional security, gender livelihood strategies, and rural value chains. The paper concludes with a need to foster and push for enabling policies, extension and finance mechanisms, and grassroots innovations to unlock higher productivity, resilience, and inclusive growth. This paper goes into short report on the contribution of agriculture and animal husbandry in Saswad (Purandar taluka), Pune district, covering main crops & horticulture, livestock/dairy, economic roles (income & employment), etc.

Keywords: Agriculture, animal husbandry, rural economy, livelihoods, value chains, food security, policy

Introduction

Rural economies typically revolve around primary production—crop farming and animal rearing being the most widespread activities. While agriculture (crop production) often receives the most policy attention, animal husbandry (including dairy, small ruminants, poultry, and aquaculture) is equally critical for livelihoods, nutrition, and income smoothing. The two sectors interact strongly: crop residues feed livestock, livestock provide draft power, manure, and income, while integrated farming can increase resource-use efficiency and resilience to shocks. Understanding their combined and separate contributions is essential for designing rural development strategies that are productive, equitable, and sustainable. Agriculture is basically growing crops and plants to get food, fiber, and other useful products. It's important because it feeds people, provides raw materials for industries, gives jobs, and adds to the economy. Subsistence farming (growing food just for your family), Commercial farming (growing crops to sell in the market), Organic farming (using natural fertilizers instead of chemicals) are more popular types of farming found in rural areas. Main crops include rice, wheat, maize, lentils, cotton, sugarcane, tea, and coffee. Modern farming techniques have helped the farmers to adopt tractors, better seeds, irrigation (like drip or sprinkler), and fertilizers/pesticides to increase yield.

Animal husbandry is about raising animals for food, products, or labour. It's important because it provides milk, meat, eggs, wool, leather, and helps farmers earn money. It is the branch of agriculture concerned with the breeding, rearing, and management of farm animals for food, fiber, labour, and other products such as milk, meat, eggs, wool, leather, and manure. It plays a vital role in the rural economy by providing livelihood, employment, and nutrition to millions of households—especially small and marginal farmers. It serves as a reliable source of supplementary income and helps in risk diversification when crops fail due to climatic or market uncertainties. Dairy farming (production of milk and milk products), Poultry farming (raising chickens and other birds for eggs and meat), Sheep and goat rearing (for wool, meat, and manure), Pig farming (for meat production), Fisheries and aquaculture (in regions with water resources), Bee keeping (apiculture - for honey and pollination services) are much popular. In India, the livestock sector contributes nearly 30% of the agricultural GDP and around 5% of the national GDP. It provides direct employment to over 8% of the rural workforce. Animal husbandry ensures food and nutritional security through protein-rich animal products.

Objectives

- Describe the roles of agriculture and animal husbandry in rural economies.
- Analyze how these sectors contribute to employment, income, and food security.
- Delve into Saswad region of Pune, Maharashtra and assess its impact into the livelihoods of the people.

The analysis synthesizes existing literature—academic studies, international organization reports, and country case studies—using a qualitative comparative approach. Where relevant, the paper draws on established frameworks for assessing sectoral contributions: value-chain analysis, livelihood diversification, and ecosystem services.

Conceptual Linkages: Why Treat the Two Sectors Together? – The Literature Review

Delgado, C. L., *et al*. (1999) [5] presented a seminal sectoral review and projection analyzing global demand and supply trends for livestock products and policy/technology implications
projecting a "livestock revolution"; vehemently establishing the macroeconomic and structural context for why livestock (animal husbandry) matters to rural economies and value chains.

Thornton, P. K. & Herrero, M. (2010) [8] presented an analytical review of how expanding livestock production affects land, water, greenhouse gas emissions and food security; synthesizes modeling and empirical studies. The authors stress efficiency improvements, better feed and integrated systems to reduce environmental footprint while maintaining benefits for rural livelihoods. Their paper provides a balanced picture: livestock expansion as both opportunity and environmental challenge for rural economies.

Ellis, F. (1998) [6] put forth diversification strategies used by rural households in developing countries. Households combine crop production, livestock rearing, wage labor, and off-farm activities to manage risk and accumulate assets; livestock often plays a unique role as a store of value and a source of flexible cash. Land-poor households diversify out of agriculture; landowners may diversify within agriculture (including animal husbandry).

It brings animal husbandry and crop agriculture within household livelihood strategies and explains why portfolio approaches matter for rural incomes and resilience.

Sekaran, U., *et al*. (2021) believed that ICLS improve resource-use efficiency (nutrient cycling, fodder/crop residue use), reduce seasonal risk, increase smallholder incomes and food security, and can be more climate-resilient than specialized systems — provided appropriate institutional and extension supports exist. It directly supports treating agriculture and animal husbandry as complementary sectors and provides evidence for policy emphasis on integration.

FAO. (2010) provides expert consultation synthesizing field experience, case studies and recommendations emphasizing that integrated approaches at farm/watershed scale deliver productivity, environmental and socio-economic benefits; success needs enabling policy, extension and market linkages.

6. Galiè, A., *et al*. (2019) develops and validates an index to measure women's empowerment specifically in livestock contexts. Women's control over livestock resources, decision-making and income has measurable impacts on household wellbeing and nutrition; livestock interventions that do not consider gender can miss benefits or reinforce inequalities.

this paper highlights gender dimensions — crucial since livestock is often under women's control at the household level; links animal husbandry to empowerment and rural development outcomes.

Contributions to the Rural Economy

Employment and Labor Absorption

Both sectors are labor-intensive and absorb large shares of rural labor, including seasonal and casual workers. Smallholder farming and small-scale animal rearing provide self-employment and wage opportunities, particularly for marginalized groups with limited access to salaried employment.

Income Generation and Diversification

- **Direct income:** Sale of crops, milk, meat, eggs, and hides contributes to household cash flow.
- **Risk management:** Livestock act as informal savings and insurance—households sell animals or animal products during shocks.
- **Value addition:** Processing (e.g., dairy, meat cutting, feed production) increases earnings along value chains and generates rural non-farm jobs.

Food and Nutritional Security

Animal-source foods (milk, eggs, meat, fish) are dense in high-quality protein, micronutrients (iron, vitamin B12, zinc), and are critical for child growth and maternal nutrition. Crop diversification provides dietary staples and micronutrients through vegetables, pulses, and cereals.

Market Linkages and Local Economies

Agriculture and livestock production stimulate demand for inputs (seed, feed, veterinary services), transport, agro-processing, and retail—strengthening rural markets and multiplier effects.

Environmental and Ecosystem Services

Well-managed integrated systems can enhance soil fertility, sequester carbon, and support biodiversity. Conversely, poor practices (overgrazing, monocultures, improper waste management) can degrade resources.

Major Challenges

Structural Constraints

- Fragmented landholdings reduce economies of scale.
- Limited access to affordable credit and insurance for smallholders.
- Insufficient rural infrastructure (roads, cold chains, market yards).

Technological and Knowledge Gaps

- Low adoption of improved crop varieties, feeding and breeding technologies.
- Weak extension systems and fragmented dissemination of best practices.

Market and Value-chain Failures

- Price volatility and weak market information systems.
- Limited processing and aggregation capacity, leading to high post-harvest losses.

Institutional and Policy Issues

- Policies sometimes biased towards staple crop support rather than integrated farm systems.
- Trade and sanitary regulations can be barriers for small-scale producers.

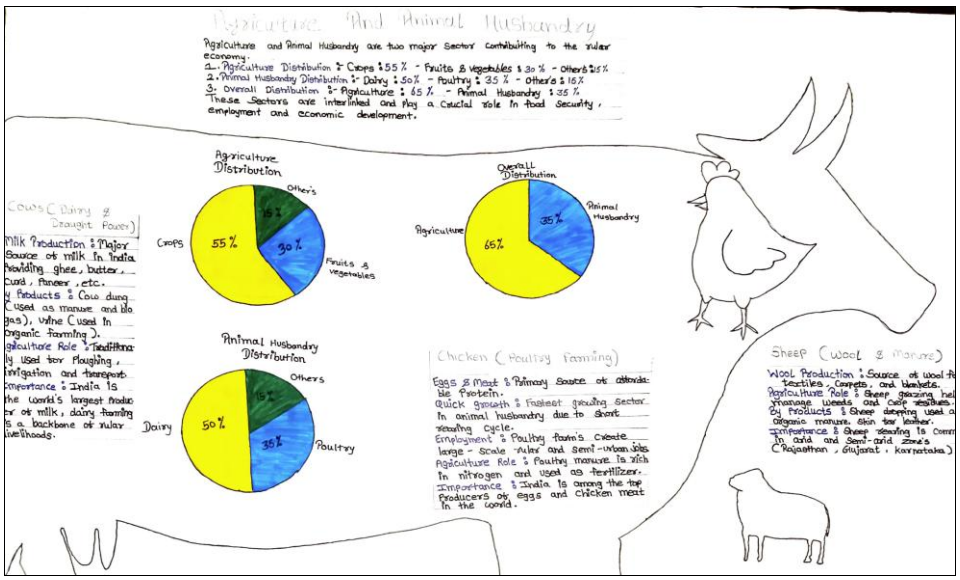
Environmental and Climate Risks

- Droughts, floods, and shifting weather patterns affect both sectors.
- Livestock emissions and manure management pose sustainability challenges if not well managed.

Social and Gender Barriers

- Unequal land and asset ownership restrict women's ability to scale productive activities despite often being primary livestock caregivers.
- Cultural norms may limit women's access to markets and finance.

Contribution of Agriculture & Animal Husbandry in Saswad (Purandar Taluka, Pune)



Saswad (in Purandar taluka, Pune district) is a mixed agricultural-horticultural and livestock area. Crop farming (rainfed and irrigated kharif/rabi crops), expanding fruit horticulture (custard apple, figs, guava) and small-scale dairy/buffalo rearing are the main rural economic activities. Horticulture processing (fruit pulp, spreads) and farmer producer organizations provide growing value-chain opportunities; dairy and small ruminants provide regular cash flows and risk-coping for households. District-level livestock data show large livestock populations — indicating animal husbandry is an important rural livelihood in and around Saswad.

1. Agriculture — crops, horticulture and value addition

Field crops: The taluka grows typical Pune-district kharif and rabi crops (maize, jowar/bajra, pulses, soybean and some paddy in irrigated pockets). District reports and recent sowing updates show Pune district recording strong kharif sowing and maize being used increasingly as fodder and a cash crop.

Horticulture: Purandar taluka (Saswad area) has seen a push into fruits — notably custard apple, figs and guava. Local processing for fruit pulp and spreads has been developed to reduce distress sales and add value locally. This has created year-round processing and off-farm employment in the taluka.

Local producers and FPOs: Farmer Producer Companies / initiatives (e.g., Purandar Highlands *FPC*) operate from Saswad, focusing on high-value micro-horticulture and market linkages — an indicator of organized value-chain activity.

Agriculture in Saswad

Saswad is noted for green-pea (matar) production in the region: a news article mentions that "Pune district's Purandhar taluka and Saswad, Singapur belts are famous for pea cultivation." (https://agrowon.esakal.com/agro-special/pea-production-of-saswad). According to the District Agriculture Department for Pune district, total cultivated land is about 9,91,787 ha (in the entire district) and crop-season data is tracked (punezp.gov.in).

The grassland ecosystems around Saswad are still used for grazing by shepherd communities (the Dhangars) with sheep, goats and horses. This underscores the linkage of livestock / animal husbandry to the land and agriculture - "Their livestock includes sheep, goats, and horses … fodder for the livestock herded by the Dhangar shepherds comes from the grasslands … manure from the sheep helps to replenish the nutrients on agricultural land during crop change cycles."
(https://roundglasssustain.com/conservation/dhangars-saswad-traditional-livelihoods)

Economic role of crops/horticulture in Saswad

- **Income diversification & seasonal smoothing:** Horticulture (fruits) provides higher margins and year-round processing work; cereals and maize continue to supply staple food and fodder.

- **Employment / non-farm linkages:** Processing (fruit pulp, packaging), transport, and input suppliers create rural non-farm jobs linked to agriculture.

2. Animal husbandry — dairy, buffalo, goats & poultry

District livestock scale: Pune district (which includes Purandar taluka) has large livestock numbers per the 20th Livestock Census and NABARD/Pune PLP documents — indicating dairy and small ruminant rearing are major activities in the district. The district report highlights dairy farming as a prime activity across many talukas and the presence of veterinary services (https://www.nabard.org/auth/writereaddata/tender/MAH_Pune.pdf)

Local dairy activity in Saswad: Local dairies, small milk collection centres and private dairy farms are numerous in Saswad (many small dairies listed in local directories). Buffalo rearing and feeding practices are specifically studied in Purandar taluka, confirming buffalo/dairy is an important livelihood there.

- The District's Animal Husbandry Department describes livestock and allied activities as important supplementary occupations in rural Pune.
- A historical review for the Gazetteer of Poona district notes: "Some of the largely attended cattle markets are held … at Saswad" — implying Saswad is a centre for livestock trade.
- Specific to Saswad area, the interplay of grazing, small ruminants (sheep/goats) and farmland manure cycling is documented (see above in the grassland article).
- For Pune district more broadly: there are data such as: 1,326 primary dairy co-op societies, 4 milk processing plants (capacity 5.50 lakh litres/day) plus 41 private plants (capacity 63.55 lakh litres/day) and 57 chilling plants (capacity 27.53 lakh litres/day).

Economic role of Animal Husbandry in Saswad

- **Regular cash income & risk management:** Milk sales provide daily/weekly cash flows; animals act as informal savings and shock buffers.

- **Employment & allied services:** Demand for fodder, feed, veterinary care, milk collection, and transport supports local employment and small enterprises.

- **Value chains:** Milk/dairy products are sold to local processors/retailers or aggregated by small collection centres; small-scale ghee/curd/paneer production supports local markets.

3. Combined Contribution to the Rural Economy

Complementarity: Crop residues (maize stover, sorghum stalks) feed livestock; manure returns nutrients to fields — a circular benefit for small farms around Saswad. Local shift toward maize for fodder has been noted regionally.

Income & resilience: Households that combine horticulture + dairy typically have more stable incomes versus mono-croppers — horticulture raises per-ha returns while livestock smooths cash flows and offers resilience to crop failure. Case evidence from Purandar supports diversified farm strategies under variable rainfall.

The study and interactions helped us to draw the following inferences for Saswad:

- Agriculture remains a primary livelihood in Saswad: many workers are cultivators (in village-level census data: in one Saswad village, 944 cultivators and 334 agricultural labourers out of ~1,609 workers) (www.censusindia.co.in)
- Green-pea cultivation is a notable crop in the area; this suggests that high-value vegetable/horticulture segments are part of the agriculture side in Saswad.
- Animal husbandry (especially sheep/goat herding by the traditional Dhangar community) plays a complementary role: grazing landscapes around Saswad support small ruminant livestock, which in turn supply manure for crop fields and integrate with the agricultural cycle.
- Saswad also appears as a livestock-market node (cattle markets) historically, indicating that animal husbandry contributes to the rural economy via trade, not just production.
- Because animal husbandry is described as "supplementary occupation" in the district and linked to income smoothing, it likely contributes to rural livelihoods in Saswad as well — particularly among households with smaller land holdings or engaged in mixed farming (crop + livestock).

Agriculture (especially crop cultivation, with a noted case of pea cultivation) and animal husbandry (notably sheep/goats in grassland systems, and cattle markets) both contribute to Saswad's rural economy. Agriculture likely remains the backbone, while animal husbandry offers important complementarities, livelihood diversificati\on, and value-chain participation.

Pathways to Strengthen Contributions

- Promoting integrated farming systems and practices that combine crops, livestock, agroforestry, and aquaculture where appropriate to improve resource efficiency and resilience can help in bringing a turnaround.
- Strengthening input and service markets will contribute to expand access to quality seeds, animal feed, vaccines, and breeding services, building rural veterinary networks and community animal health workers.
- Improving access to finance and risk management and develop tailored microfinance, value-chain financing, and livestock insurance products shall support savings groups and digital payments to facilitate transactions.
- Enhancing value chains and processing such as investing in small-scale processing (milk chilling, egg packaging, meat cold storage) and aggregation may reduce post-harvest loss and increase farmer margins.
- Improving market information systems and contract farming arrangements with safeguards for producers will bring the stakeholders into the visibility much required.
- More focus on promoting improved grazing management, fodder production, manure composting, and emissions-reducing technologies as well as encouraging crop and breed diversification and climate-resilient varieties can be beneficial.
- Designing extension services and training timed and targeted to women, creating entry points (e.g., small ruminants, poultry, value addition) attractive to youth and women entrepreneurs will bring in the desired changes and results in the field.

Conclusion

Agriculture and animal husbandry are not merely co-existing activities in rural economies; they are complementary systems whose joint strengthening can deliver higher incomes, better nutrition, and resilient livelihoods. Policy action must move beyond sectoral silos to support integrated farming systems, improved value chains, inclusive finance, and gender-equitable access to resources. With appropriate investments and institutional reform, these two sectors can continue to be engines of inclusive rural development.

References

1. Food and Agriculture Organization of the United Nations (FAO). Various publications on livestock, integrated farming, and food security.

2. World Bank. Reports on agriculture, rural development, and value-chain interventions.
3. International Food Policy Research Institute (IFPRI). Research on agriculture–livestock systems, nutrition, and policy.
4. FAO/IFAD/WFP. State of Food Security and Nutrition in the World (annual reports).
5. Delgado CL, *et al*. Livestock to 2020: The next food revolution. Food, Agriculture, and the Environment Discussion Paper, 1999.
6. Ellis F. Household Strategies and Rural Livelihood Diversification. Journal of Development Studies, 1998.
7. Government of India, Ministry of Agriculture & Farmers Welfare. Publications and statistical reports.
8. Thornton PK, Herrero M. The inter-linkages between rapid growth in livestock production, environmental issues, and food security. Philosophical Transactions of the Royal Society B, 2010.