

Entrepreneurship and Self-employment through Livestock among Scheduled Tribes

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Journal of Livestock Science (ISSN online 2277-6214) 14: 233-245
Received on 1/3/23; Accepted on 23/7/23; Published on 30/7/23
doi. 10.33259/JLivestSci.2023.233-245

Abstract

Self-employment through livestock rearing among tribal communities help to manage their own businesses and become economically self-sufficient. It allows them to leverage their indigenous knowledge of local ecosystems, animal behaviour, and traditional breeding practices to create niche markets for their livestock and related products. Moreover, self-employment provides tribes with a sense of autonomy and control over their economic destinies, thereby strengthening their cultural identity and resilience. By engaging themselves in these entrepreneurial ventures, tribes can create alternative income sources, reduce their dependence on traditional occupations, and foster economic empowerment within their communities. However, entrepreneurship and self-employment in the livestock sector among tribes also present unique challenges. Limited access to capital, lack of formal education and training, and inadequate infrastructure often hinder their entrepreneurial endeavours. Henceforth, partnerships between tribal communities, government agencies, non-profit organizations, and the private sector can play a vital role in creating an enabling ecosystem for tribal entrepreneurship in the livestock sector. Therefore, this paper compiles emerging knowledge on significant livestock aspects of entrepreneurship and support services, including practical skills and information needs among self-employed tribal people. Furthermore, it tries to investigate governmental interventions and institutional policy development on livestock enterprises as growing self-employment. Lastly, it concludes the relationship between tribes and livestock-based livelihoods and its impacts on their economic enhancement via entrepreneurship development.

Keywords: Tribes; entrepreneurship; self-employment; livestock; economic-development; livelihood; empowerment; sustainable livelihoods.

Introduction

The increasing significance and visible impact of entrepreneurship in wealth creation and employment-generation has been accepted globally as the engine of economic growth. Entrepreneurs have been recognized for the significant role played in sustainable economic development. Livestock is the best insurance against the vagaries of nature like drought, famine, and other natural calamities. The concept of entrepreneurship has been around for a very long time. In the last decade, it has resurged as if a new discovery has been made. Usually, anyone who runs a business is called an entrepreneur. The more precise meaning of entrepreneur is one who creates his own business i.e., a person who organizes, operates, and assumes the risk of a business venture. An entrepreneur is a person who perceives a need and then brings together the manpower material and capital required to meet that need. Entrepreneurship is effectively required for improving the land base, equity in agricultural growth, and employment guarantee programs by merging various wage employment schemes by pooling and considerably augmenting these resources. Corporate agriculture can create more employment.^[1]

“Entrepreneurship, which is one the most powerful economic force known to human kind, is empowering individuals to seek opportunities where others find intractable problems. Entrepreneurship is the symbol of business tenacity and achievement; it is a vital source of change in all facets of society” (Pahuja, 2015). “In the past decade or so, entrepreneurship has expanded well beyond its traditional home in business school’s (Nambisan, 2015). The entrepreneur is the person who is in charge, the leader, and the person to look for leadership. He or she is the one that pushes forward and inspires a team to follow. As far as dairy entrepreneurship is concerned, development of the dairy through the application of modern science and technology will greatly contribute to improving the socio-economic conditions of rural masses by making dairy farming more productive and remunerative (Chandraker et al., 2019).

Literature Review

Migration and animal husbandry are important complementary livelihood strategies for the rural population of India (Schoch et al 2010). Some development networks are helping the rural poor to obtain livestock to increase the financial security of their households and help enterprising rural poor emerge from poverty (Veen, 2001). Livestock are a major source of savings for farming families (Arriaga-Jordán, et.al., 2004). The rapidly expanding demand for livestock products offers an opportunity as well as a challenge to livestock production (Birtal & Jha, 2005). The livestock sector is moving towards specialization with the increasing involvement of big farmers and investors (Ali, 2007). Livestock is a livelihood of underprivileged communities like STs/SCs in India (Rangnekar, 2006). Support services including livestock-related technical skills and science-based information need to be in place to make use of livestock entrepreneurship as a viable career option in the emerging interest of marginalised Rural populations. (Lemma, 2014). The farm families' productivity of the livestock and poultry reared was low attributed to various technological, socio-economic, and infrastructural constraints. (Mazumder et al, 2014). The majority of livestock entrepreneurs were of middle age group (35-50 years) (Harisha et al, 2021).

The lack of access to land, livestock resources, and good marketing opportunities for SC’s and ST’s cultivators stand in the way of a more successful diversification of livestock activities. (Sarkar, 2020). Livestock is a livelihood of the underprivileged communities in India. (Rangnekar, 2006). Livestock farming has been one of the most important value-adding farming systems adopted in different countries (Khan & Iqbal, 2008). The livestock sector has emerged as an important segment of an expanding and diversifying agricultural sector in the Indian economy (Singh et.al, 2020). The participation of tribal farmers in animal husbandry occupation was observed more in the aspects related to milking, feeding, health care, and management, breeding, and buffalo rearing (Rai et al, 2019).

The goat rearing provided an opportunity for efficient utilization of family labor (Kumar & Deoghare, 2003). Livestock rearing has a significant positive impact on equity in rural areas as the distribution of livestock is more egalitarian as compared to land (Ali, 2007). Cattle and buffalo rearing play an important role in improving the socio-economic condition of the rural masses by providing additional income as well as complementing agriculture. (Kalash, 2009). The rapidly expanding demand for livestock products offers an opportunity as well as a challenge to livestock production (Birtal & Jha, 2005). The occupational and family income from animal husbandry had a positive and highly significant influence on problems of livestock rearing (Kuma et al 2019). Livestock ownership requires significant investments of household time and labor (Dumas, et.al. 2018). Raising small livestock and fish can improve income and nutrition (Blackmore et al., 2018). Small livestock rearing and fish farming in catchment farm ponds, tanks, and reservoirs could be important potential sources of livelihood for these rural households (Kumar et al, 2020). The construction of roads in the region and the introduction of communication and other developmental infrastructures threatens the traditional way of life and indigenous cattle and livestock management (Wani et al, 2019). The livestock loss rate did negatively impact

¹<http://www.ddegjust.ac.in/studymaterial/mba/cp-401.pdf>

the number of livestock in India and also a major economic loss for rural tribal entrepreneurs (Li et al, 2020).

Methodology & Objectives

This paper is a review paper based on the survey of the literature available on Entrepreneurship development among tribes through Livestock rearing. Moreover, it also includes various government reports and schemes specifically focused to create livelihood among Scheduled tribes through self-generating activities. This paper tries to highlight the role of entrepreneurship in tribal economic development. What are the opportunities and challenges faced by tribal communities while engaging themselves in self-income-generating activities? And how government intervention helps in catalysing these activities of sustainable livelihood.

Entrepreneurship and Tribes

Livestock entrepreneurship is a crucial socio-economic improvement factor for the weaker section of rural society, particularly landless laborers, and small and marginal farmers' livestock sector contributes to National Economy besides promoting diversification and sustainable agricultural systems. In addition, this sector contributes to extra earnings for the rural population and is also contributing to food and nutritional security (Radha & Vijay Krishna Kumar, 2022). Poultry Farming is the process of domesticated birds, and the eggs and meat or poultry birds in the backyard Farming will improve the economic status of a majority of rural and tribal families (Singh & Sonwani, 2021). Backyard poultry farming or fishery and dairy productions create self-employment, supplementary income with high protein-rich food at low cost, and a safety net for rural people as well as coping economic development mechanism. Overall Livestock entrepreneurship impact is positive on improving livelihood and the level of income of tribal communities. The Indian livestock sector is one of the largest in the world with holdings of 11.6 per cent of the world. India is an agrarian economy and farmers are known as the backbone of the economy. Animal husbandry is the backbone of the economy of these farmers, by bringing an additional and steady income. Agriculture and animal husbandry have been a part of the Indian economy for a long. India has one of the largest populations of livestock and stands first in milk production. Livestock helps in women's empowerment and provides livelihood to many marginal farmers. In an Agriculture based-economy real development can be achieved only by developing a farming community who raise livestock as the main component. Poverty alleviation programmes of the government won't be successful until and unless the focus on investment of the governmental policies is not agriculture and animal husbandry. India's real development will be achieved only when agro- livestock sector receives the highest investment priorities with latest technologies incorporated with traditional knowledge (Shanmathy et al., 2018).

The livestock sector plays a multi-faceted role in socio-economic development of rural households. Livestock rearing has significant positive impact on equity in terms of income and employment and poverty reduction in rural areas as the distribution of livestock is more egalitarian as compared to land. In India, 70 percent of the rural household's own livestock and a majority of livestock-owning households are small, marginal and landless households. Small animals like sheep, goats, pigs and poultry are largely kept by the land-scarce poor households for commercial purposes because of their low initial investment and operational costs (Ali, 2007). These findings highlight the importance of farmer participatory evaluation of fodder traits in the development of improved dual-purpose varieties. However, the impact of these varieties on poor farm households will be contingent on the complementary improvement in the effectiveness of seed systems (Rao & Hall, 2003). The primary benefit to be derived from increase in livestock productivity is a sustainable improvement in the livelihoods of livestock producers, many of whom are resource-poor, many of these being women and some of whom are landless. Some of the benefits will be reflected in improved levels of nutrition, while increases in market sales will provide income for other uses. Increases in domestic production and supply of livestock products may result in falling prices. This will benefit consumers and accelerate the growth in demand. However, the fall in price is unlikely to be large enough to cancel out the benefits to producers of the increases in productivity. The main effect for most developing countries will be the substitution of domestic products for imports. This effect will bring additional benefits by saving scarce foreign exchange (Upton, 2003). Industrialization is a dynamic instrument of growth, promoting rapid economic and social Development as it shifts labour and other resources from labour-intensive and less productive activities towards more capital- and technology-intensive ones. Policies that encourage economically and environmentally sustainable agro-industrialization and Livestock, shifting more workers towards more productive and portable activities, and integrating small-scale producers in the growth of value chains, are likely to yield higher social and economic returns (Rocha et al 2018). Livestock is also linked closely with the local culture and traditions, which are being followed ever since the domestication of livestock for economic benefits. Presently, livestock has been directly contributing to the livelihood and food security of more than a billion people in different parts of the world. A majority of them have been living in developing countries, with small land holding, deprived of assured income from crop production and depending heavily on livestock husbandry for food security (Hegde, 2019). As livestock husbandry is an opportunity for poor and illiterate income for sustainable livelihood. The objective of the Indian government's red fund is the development of infrastructure related to dairy processing, with an initial allocation of INR 2000 crore (\$ 288.07 million) for 2017-18 and an increase to INR 8000 crore (\$ 1152.28 million) over the

next three years. To guarantee quantitative and qualitative development in livestock production systems and capacity building of all stakeholders, the Government of India initiated the National Livestock Mission. Agriculture and related industries account for 30% of India's GDP.

Both the food and nutrition security as well as the farmers' way of life are impacted by livestock. With the help of legislative changes and infrastructural spending, this sector of agriculture has grown more rapidly than others. Dairying, poultry, and pig farming are all types of animal husbandry, while both inland and sea fishing are forms of fishing.^[2] The proportion of livestock in total agricultural output is increasing as a result of the far faster increase of livestock production than crop production.^[3]

Livestock value chains represent a large and growing employment sector. They include farm-level production, input, and service industries to farmers; transportation of livestock and their products; and processing and marketing. Livestock provides high-quality food, cash income and employment. Livestock ownership also significantly impacts farm productivity through the provision of draft power and manure for fertilizer in crop production. Livestock ownership helps sustain farming and economic stability. It is a major form of investment and a source of livelihood for many farmers at times of drought, flood and other natural calamities. Livestock is also important in the social and cultural lives of millions of small-scale farmers as a symbol of wealth and for use in many ceremonies (Lemma, 2014).

Entrepreneurship is now understood to be the catalyst for industrialization and economic growth. By investing the necessary time and effort, taking on the corresponding financial, psychological, and social risks, and reaping the ensuing rewards of a financial nature, personal satisfaction, and independence of decision-making, livestock entrepreneurship is defined as the process of creating something new with value. The cattle business owner is motivated to engage in farming since it raises living standards, generates decent revenue, and elevates one's social and economic standing. By entering the sheep farming industry, the livestock entrepreneur developed decision-making abilities, self-assurance, inventiveness, risk-taking prowess, tenacity, enthusiasm for success, leadership, and optimism (Malagittimath, 2017).

Over half of the value of agricultural outputs produced globally and one third in developing nations are derived from livestock. It is considered a "food revolution" in emerging nations when the demand for animal products increases quickly. Animals raised in the past that will be used to produce goods in the future are considered capital assets. The predicted future return on capital justifies saving money or borrowing money in order to invest in or purchase cattle. **Table 1** shows the percentage distribution of households in different social groups. For each social group, the table provides the percentage of households engaged in agriculture, the percentage of households engaged in non-agricultural activities, and the percentage of rural households in total. In the ST (Scheduled Tribe) category, 14.2% of households are engaged in agriculture, 10% are engaged in non-agricultural activities, and ST households make up 12.3% of all rural households.

Similarly, the table provides the corresponding data for the SC (Scheduled Caste), OBC (Other Backward Classes), and others categories. The last row of the table represents the total percentage distribution, with 100% indicating the entire population of agricultural and non-agricultural households in rural areas.

Table 1: Percentage distribution of agricultural households and non-agricultural households by social group in rural areas of India for the agricultural year July 2018- June 2019

Social group	Agricultural households	Non-agricultural households	Rural households
ST	14.2	10	12.3
SC	15.9	28.4	21.6
OBC	45.8	42.8	44.4
others	24.1	18.8	21.7
All	100	100	100
Source: NSSO 77th round Survey on "Land and Livestock Holdings of Households and Situation Assessment of Agricultural Households" ⁴			

²<https://investuttarakhand.com/themes/backend/investible/IP-UK-Breeding%20Farms.pdf>

³<https://niti.gov.in/sites/default/files/2019-07/RAP3.pdf>

⁴ <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1753856>

Table 2: Percentage of households reporting major source of income from Self- Employment in Livestock Farming (SELF) for each State/UT

State/UT	ST	SC	OBC	others	all
Andhra Pradesh	0	2.67	2.67	1.06	1.99
Arunachal Pradesh	0.23	0	-	1.38	0.48
Assam	5.54	13.27	3.92	2.46	4.27
Bihar	0	0.06	2.43	1.28	1.77
Chhattisgarh	0	0.54	0.25	0	0.17
Delhi	0	0	0	0	0
Goa	0	0	0	4.13	3.39
Gujarat	2.09	2.57	3.51	0.87	2.59
Haryana	0	5.87	5.6	0.33	3.16
Himachal Pradesh	0	0.66	2.74	1.65	1.46
Jammu & Kashmir	4.16	0	2.43	2.78	2.62
Jharkhand	1.19	0	2.49	0	1.5
Karnataka	0	4.26	1.5	0.16	1.78
Kerala	2.5	3.52	1.85	3.15	2.4
Madhya Pradesh	0.17	1.3	1.32	0.53	0.85
Maharashtra	0.19	0.5	1.48	1.08	1.05
Manipur	1.33	0	0	-	0.62
Meghalaya	0.02	-	0	0	0.02
Mizoram	0.8	-	0	0	0.75
Nagaland	0.22	0	0	0	0.22
Odisha	0.84	0.37	1.89	0.84	1.14
Punjab	0	5.98	0.06	4.03	4.08
Rajasthan	0	0.29	4.56	8.28	3.23
Sikkim	2.1	0	1.44	0	1.48
Tamil Nadu	0	1.32	3.76	0	2.97
Telangana	1.27	0.22	1.97	0	1.29
Tripura	0.04	4.78	0.19	0.15	0.96
Uttarakhand	0	1.98	0	0.05	0.45
Uttar Pradesh	0	0.76	1.09	0.34	0.87
West Bengal	0	0.43	0.69	2.85	1.6
Andaman & Nicobar Islands	0	0	-	0.38	0.19
Chandigarh	0	0	0	0	0
Dadra & Nagar Haveli	0	-	-	-	0
Daman & Diu	0	0	0	0	0
Lakshadweep	0	0	0	0	0
Puducherry	0	0	2.21	0	1.31
All India	0.75	1.5	2.17	1.67	1.75

Source:NSSO70th Round, 2013,
https://www.mospi.gov.in/sites/default/files/publication_reports/nss_rep_572.pdf

Table 2 shows the percentage of households within each state/UT and social group that reported self-employment in livestock farming as their major source of income. For example, in Andhra Pradesh, 2.67% of SC (Scheduled Caste) households, 2.67% of OBC (Other Backward Classes) households, 1.06% of households from the "Others" category, and 0% of ST (Scheduled Tribe) households reported self-employment in livestock farming as their major source of income. The last row of the table represents the national average, indicating that 0.75% of ST households, 1.5% of SC households, 2.17% of OBC households, and 1.67% of households from the "Others" category reported self-employment in livestock farming as their major source of income on a national scale. The overall national average across all social groups is 1.75%.

Government Initiatives to encourage livestock entrepreneurship

The establishment of Multipurpose AI Technicians in Rural India (MAITRIs) will enable farmers to receive breeding inputs at their doorstep. At certified AI training facilities, MAITRIs receive 90 days' worth of training over the course of three months. The relevant States are given equipment grants at a cost of Rs 50,000 per MAITRI. After three years, MAITRIs can support themselves by recovering the cost of their goods and services (Table 2).

Table 3: Establishment of MAITRIs to extend AI Coverage during the FY 2021-22 and 2022-23 (till date)

S.No.	State	Targets (Nos.)	Achievement (Nos.)
1	Andhra Pradesh	1000	4746
2	Telangana	250	117
3	Karnataka	1150	1410
4	Kerala	0	0
5	Gujarat	1500	125
6	Madhya Pradesh	2733	2733
7	Maharashtra	250	248
8	Rajasthan	500	248
9	Goa	0	0
10	Jammu & Kashmir	100	100
11	Punjab	100	0
12	Haryana	119	0
13	Himachal Pradesh	50	43
14	Uttarakhand	125	15
15	Uttar Pradesh	3250	1118
16	Ladakh	300 0	0
17	Assam	1089	992
18	Arunachal Pradesh	30	0
19	Manipur	100	100
20	Meghalaya	110	120
21	Sikkim	10	172
22	Nagaland	20	20
23	Tripura	142	895
24	Mizoram	0	0
25	Jharkhand	687	580
26	Chhattisgarh	125	125
27	Bihar	1000	1090
28	West Bengal	1000	506
29	Odisha	1500	0
	Total	17240	15459
Source: https://dahd.nic.in/sites/default/files/FINALREPORT2023ENGLISH.pdf			

Table 3 presents the state-wise targets and achievements for the establishment of MAITRIs. It includes various states such as Andhra Pradesh, Telangana, Karnataka, Kerala, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Goa, Jammu & Kashmir, Punjab, Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Ladakh, Assam, Arunachal Pradesh, Manipur, Meghalaya, Sikkim, Nagaland, Tripura, Mizoram, Jharkhand, Chhattisgarh, Bihar, West Bengal, and Odisha. For example, in Andhra Pradesh, the target was to establish 1000 MAITRIs, and the achievement stands at 4746. Similarly, the data represents the targets and achievements for each state. The total number of targets set was 17240, and the total number of MAITRIs established so far is 15459.

For sustainable and continuous growth of the livestock sector by emulating the success achieved in dairy and poultry sectors, across species and regions, the National Livestock Mission (NLM) was launched in 2014-15. This Mission was formulated with the objectives of sustainable development of the livestock sector, focusing on improving the availability of quality feed and fodder, risk coverage, effective extension, improved flow of credit and organization of livestock farmers/rearers etc.

The NLM intends to achieve the following objectives: 1. Employment generation through entrepreneurship development in the small ruminant, poultry and piggery sector & Fodder sector 2. Increase of per animal productivity through breed improvement 3. Increase in production of meat, egg, goat milk, wool and fodder. 4. Increasing availability of fodder and feed to substantially reduce the demand – through strengthening the fodder seed supply chain and availability of certified fodder seeds. 5. Encouraging the establishment of fodder processing units to reduce the demand-supply gap 6. Promoting risk management measures including livestock insurance for farmers 7. Promoting applied research in prioritized areas of poultry, sheep, goat, feed and fodder 8. Capacity building of state functionaries and livestock owners through strengthened extension machinery to provide quality extension service to farmers. 9. Promoting skill-based training and dissemination of technologies for reducing cost of production, and improving the production of the livestock sector.

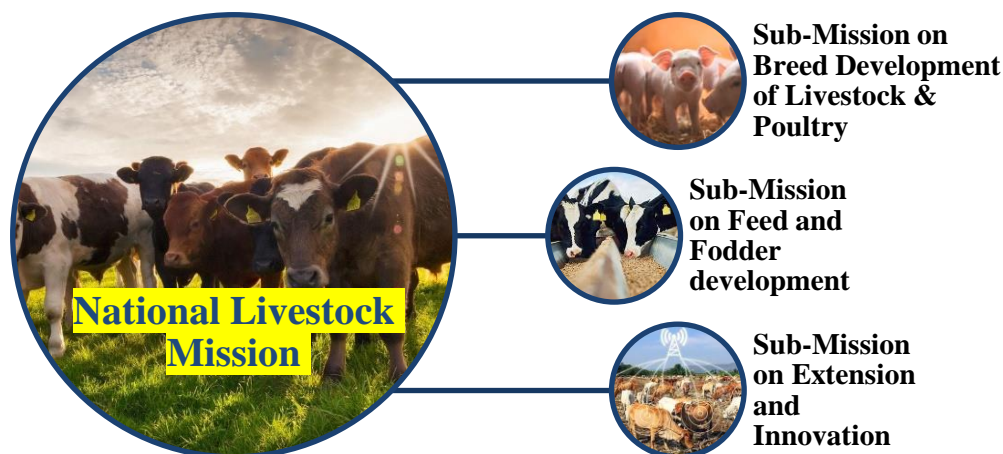


Figure 1: The concept of the NLM Scheme is to develop entrepreneurs in order to create the forward and backward linkage for the products available in the unorganized sector and to link with the organized sector. The scheme is implemented with the following three Sub-Missions: I. Sub-Mission on Breed Development of Livestock & Poultry II. Sub-Mission on Feed and Fodder development. III. Sub-Mission on Extension and Innovation.

One of the top national awards in the field of livestock and the dairy industry, the Gopal Ratna Award was introduced by the Department in 2022. The award's goal is to motivate all dairy cooperative groups, individual farmers, and technicians who work in artificial insemination. Awards are given in three categories: best artificial insemination technician (AIT), best dairy cooperative, and best dairy farmer rearing indigenous cattle or buffalo breeds. Each category's award includes a Certificate of Merit, a souvenir, and the following cash amounts: Rs. 5,00,000/- (Rupee five lakh) for first place, Rs. 3,00,000/- (Rupee three lakh) for second place, and Rs. 2,00,000/- (Rupee two lakh) for third place. In order to promote fisheries, animal husbandry and dairying, the Government is implementing various schemes in the country as per details given below: Fisheries i) Blue Revolution: Integrated Development and Management of Fisheries ii) Fisheries and Aquaculture Infrastructure Development Fund (FIDF) iii) Extension of Kisan Credit Card (KCC) iv) Pradhan Mantri Matsya Sampada Yojana (PMMSY) Animal Husbandry and Dairying⁵. 1. Rastriya Gokul Mission 2. National Programme for Dairy Development 3. Dairy Processing and Infrastructure Development Fund 4. Supporting Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activities. 5. National Livestock Mission 6. Livestock Health and Disease Control 7. Animal Husbandry Infrastructure Development Fund 8. National Animal Disease Control Programme 9. Livestock Census and Integrated Sample Survey.

Discussion

A large population of the country belongs to the Scheduled Castes, Scheduled Tribes, and other weaker sections of the society and women are engaged in activities in the livestock sectors. As a corollary, various schemes implemented by the Indian government to benefit these sections of society. However, the Department is not maintaining records of beneficiaries belonging to Scheduled Castes, Scheduled Tribes and women. Livestock and tribal entrepreneurship can go hand in hand, especially in areas where tribal communities have a historical connection to livestock rearing. Tribal entrepreneurship in the context of livestock can offer various economic and social benefits to tribal communities, including income generation, employment opportunities, food security, and preservation of cultural traditions.

Here are some key points to consider when exploring the intersection of livestock and tribal entrepreneurship:

Cultural significance: Many tribal communities have a long-standing tradition of livestock rearing, and it holds cultural and historical importance for them. Tribal entrepreneurship in this field can help preserve and promote traditional knowledge, customs, and rituals associated with livestock.

Sustainable practices: Tribal entrepreneurship can emphasize sustainable livestock management practices. Indigenous communities often have a deep understanding of the local ecosystem and traditional farming techniques that can contribute to environmentally friendly and ethical livestock production.

Economic empowerment: Livestock entrepreneurship can provide tribal communities with income-generating opportunities. By engaging in various aspects of the livestock value chain, such as breeding, rearing, processing, and marketing, tribal entrepreneurs can create employment for themselves and others in their community.

Skill development and capacity building: Tribal entrepreneurship in livestock can involve training and capacity-building initiatives to enhance the skills and knowledge of tribal community members. This can include

⁵<https://pib.gov.in/PressReleasePage.aspx?PRID=1781374>

education on animal husbandry, veterinary care, business management, marketing, and financial literacy.

Value addition and market access: Entrepreneurs can explore value addition opportunities by processing and marketing livestock products such as dairy, meat, leather, wool, and other by-products. This can lead to higher income generation and improved market access for tribal entrepreneurs.

Collaborative networks: Building partnerships and networks with government agencies, non-governmental organizations, and other stakeholders can support tribal entrepreneurs in accessing resources, technical assistance, market linkages, and funding opportunities.

Policy support: Advocacy for policies that recognize and support tribal entrepreneurship in the livestock sector is crucial. Governments can play a role in providing a conducive regulatory environment, access to credit, infrastructure development, and market support for tribal entrepreneurs.

It is essential to involve tribal communities in the decision-making process, respecting their cultural values, and ensuring that any entrepreneurial initiatives are inclusive, sustainable, and aligned with their aspirations and needs. Entrepreneurship and self-employment through livestock among tribes can bring about significant positive changes to their socio-economic well-being and overall development. The utilization of livestock as a means of entrepreneurship empowers tribes to tap into their traditional knowledge and skills, while also adapting to modern techniques and practices. By embracing entrepreneurship, tribes can break free from the cycle of poverty, unemployment, and marginalization, creating avenues for self-reliance and economic stability. Livestock-based entrepreneurship offers tribes numerous benefits, including income generation, food security, and improved access to healthcare and education. It provides a sustainable livelihood option that is deeply rooted in their cultural heritage, preserving traditional knowledge and practices while incorporating innovative approaches for increased productivity and profitability.

Furthermore, entrepreneurship and self-employment through livestock promote environmental sustainability. Tribes, often residing in ecologically sensitive regions, are well-positioned to implement sustainable farming practices that contribute to biodiversity conservation, land restoration, and climate change mitigation. By adopting responsible livestock management techniques, tribes can achieve a balance between economic development and ecological preservation, ensuring the long-term well-being of both their communities and the environment.

However, realizing the full potential of entrepreneurship and self-employment through livestock among tribes requires concerted efforts from various stakeholders. Governments, non-governmental organizations, and development agencies must collaborate to provide adequate support, including training, financial resources, and market linkages. It is crucial to empower tribes with the necessary skills and knowledge, enabling them to overcome barriers such as limited access to capital, technical know-how, and market information. In conclusion, the promotion of entrepreneurship and self-employment through livestock among tribes holds immense promise for their socio-economic advancement. By leveraging their inherent strengths, tribes can create thriving businesses, enhance their living standards, and contribute to the overall growth and prosperity of their communities. This holistic approach not only benefits the tribes directly involved but also fosters inclusive and sustainable development that respects and celebrates their unique cultural heritage.

The Indian government has recognized the potential of livestock entrepreneurship in driving rural development, improving livelihoods, and ensuring food security. To support and promote this sector, several schemes and initiatives have been introduced. In this discussion, we will explore some of the key schemes implemented by the Indian government to encourage livestock entrepreneurship. One prominent initiative is the National Livestock Mission (NLM), launched in 2014, which aims to enhance livestock productivity, promote entrepreneurship, and provide sustainable livelihood opportunities. Under the NLM, financial assistance is provided to individuals, self-help groups, and cooperatives for activities such as breed improvement, feed and fodder development, skill training, and capacity building. This scheme plays a crucial role in empowering farmers and entrepreneurs to adopt modern livestock management practices and increase their income levels.

Another significant scheme is the Rashtriya Gokul Mission (RGM), initiated in 2014, with the objective of conserving and developing indigenous cattle breeds. The RGM promotes entrepreneurship by supporting breeding programs, establishing breeding centers, and providing assistance for setting up modern cattle farms. By focusing on indigenous breeds, this scheme not only preserves India's rich cattle heritage but also encourages entrepreneurs to engage in activities such as organic farming, dairy production, and biogas generation.

In addition to these, the government has also launched the Dairy Entrepreneurship Development Scheme (DEDS) to promote dairy entrepreneurship among unemployed youth and farmers. DEDS provides financial assistance for setting up small-scale dairy units, procurement of milch animals, and infrastructure development. This scheme plays a crucial role in creating self-employment opportunities, empowering individuals to become dairy entrepreneurs and contributing to the overall growth of the dairy sector in India.

The Prime Minister's Employment Generation Programme (PMEGP) is another important scheme that supports livestock entrepreneurship. It aims to generate sustainable employment opportunities in rural and urban areas by providing financial assistance for setting up micro-enterprises, including livestock-based businesses. By offering loans and subsidies, PMEGP enables aspiring entrepreneurs to establish their ventures, create jobs, and contribute to economic growth.

Moreover, various state-specific schemes complement the central government initiatives. For instance,

states like Gujarat, Rajasthan, and Telangana have implemented schemes like Kamdhenu Yojana, Pashu Kisan Credit Card, and Sheep Rearing Scheme, respectively, to promote livestock entrepreneurship at the local level. These state-level initiatives provide targeted support and resources to address specific regional challenges and opportunities.

While these schemes have been instrumental in promoting livestock entrepreneurship, there are still some challenges that need to be addressed. These include limited access to credit, inadequate market linkages, lack of training and technical support, and infrastructural gaps. The government should continue to focus on addressing these challenges and ensure the effective implementation of schemes by strengthening coordination between various stakeholders and providing necessary resources.

Conclusion In conclusion, the Indian government's schemes to promote livestock entrepreneurship demonstrate a commitment to rural development, poverty alleviation, and economic growth. By offering financial assistance, technical support, and capacity building, these initiatives empower individuals, especially marginal farmers and unemployed youth, to venture into livestock-based businesses. It is essential for the government to continuously assess and improve these schemes to address emerging challenges and create new opportunities in the livestock sector, ultimately contributing to the overall socio-economic development of the country.

Moreover, market integration, quality control, and value addition are crucial factors that need to be addressed to ensure the sustainability and competitiveness of tribal livestock enterprises. To promote entrepreneurship and self-employment through livestock among tribes, there is a need for comprehensive policies and programs that address these challenges. Initiatives should focus on providing financial assistance, training and capacity building, market linkages, and infrastructure development.

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Table A: Average number of livestock owned by Scheduled Tribes per 1000 households by size class of household operational holding

	average number (0.0) of livestock owned per 1000 households																			no. of opr. holdings			
AllIndia	adult cattle			young cattle			adult buffalo			young buffalo													
size class of hh operational holding (ha)	male	Female	male + female	male	Female	male + female	male	Female	male + female	male	Female	male + female	horse & pony	mule	donkey	camel	yak	Mithun	elephant	other livestock	std. (00)	sample	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Nil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
>0.000 & ≤0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	4	
0.002-0.005	252.9	528.4	781.3	77.7	106	183.6	2.9	60.6	63.5	2.9	111.2	114.1	0	0	0	0	0	102	52.7	14.9	1449	108	
0.005-0.040	98.3	294.2	392.5	103.7	138.2	241.9	0	149	149	7.1	171.4	178.5	11.8	0	0	0	0	9.2	0	3.1	8267	143	
0.040-0.500	653	411.3	1064.3	152.9	167.5	320.5	42.9	105.6	148.5	8.1	54.8	62.8	8.2	0	0.7	0.4	3	0	16.1	46128	948		
0.500-1.000	967.8	437.7	1405.5	215.2	186	401.2	67.1	128.5	195.5	71	56.1	127.1	1.3	0	0.3	1.1	3.4	8.3	0	3.5	42260	1058	
1.000-2.000	1040	624.3	1664.4	262.2	227.7	489.9	93.7	184.9	278.6	64.4	128.3	192.7	1.7	0	1.3	0	0.7	54	0	4.5	27347	1816	
2.000-3.000	1187	632.8	1819.8	335.1	284.6	619.7	119	262.5	381.5	66.2	175.1	241.4	0	0	0	3	0	98.6	0.1	10.7	9473	1004	
3.000-4.000	1312	861.8	2173.3	283.6	487.8	771.5	108.7	471	579.7	310.6	481.2	791.8	25.8	0	0	0	0	31.3	0	23.7	2088	191	
4.000-5.000	1415	907.6	2322.9	440.4	363.6	804	296.8	413.9	710.7	241.5	172.1	413.6	0	0	34.6	0	0	11	0	62.9	1355	106	
5.000-7.500	1491	676.3	2166.9	518.2	430.9	949.2	105.2	743.8	849	35.2	197.9	233.2	0	0	0	0	0	0	0	0	789	64	
7.500-10.00	2521	854.5	3375.2	204.3	383.6	588	474.8	932	1406.8	0	946.6	946.6	0	0	0	0	0	0	0	0	381	23	
10.00-20.00	1250	1226.9	2477.1	585.5	934.2	1519.7	810.2	1558.3	2368.5	567.7	1049.7	1617.4	0	0	0	0	0	0	0	0	41	7	
>20.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
all sizes	850.6	484.8	1335.4	208.9	199.5	408.4	67.6	155.6	223.1	49.1	96.3	145.4	4.5	0	0.7	0.8	1.3	23	0.6	9.3	139591	5472	
estd. no of opr. holdings (00)	5748	43665	74538	20298	21224	33385	5020	13891	17643	4631	8844	11595	412	0	67	107	116	615	39	667			
sample no of opr. Holdings	2162	1857	2762	932	992	1466	237	480	647	137	224	317	17	0	5	4	10	121	2	52			

Source: NSSO70th Round, 2013, https://www.mospi.gov.in/sites/default/files/publication_reports/nss_rep_572.pdf

Table B: Number of Scheduled Tribes households reporting sheep, goat, pig, and rabbit per 1000 households and average number owned per 1000 households by size class of household operational holding

AllIndia size class of hh operational holding (ha)	no. per 1000 of hhs reporting owning of				average number (0.0) owned per 1000 hhs					estd. (00)	sample
	sheep	goat	pig	rabbit	Sheep	goat	pig	rabbit			
1	2	3	4	5	6	7	8	9	10	11	
nil	0	0	0	0	0	0	0	0	0	0	
>0.000 & ≤0.002	0	306	0	0	0	612.4	0	0	14	4	
0.002-0.005	61	341	154	10	107.6	1496.3	518.3	45.7	1449	108	
0.005-0.040	6	253	29	0	38.3	1159.9	126.4	0	8267	143	
0.040-0.500	28	300	66	1	163.3	917.8	239.1	3.1	46128	948	
0.500-1.000	22	360	114	2	110.4	1135.7	266	2.7	42260	1058	
1.000-2.000	19	285	141	0	143.4	1028.6	469.2	0.5	27347	1816	
2.000-3.000	15	310	121	2	71.1	1349.1	449.1	4.6	9473	1004	
3.000-4.000	6	264	113	2	22.9	998.7	312.2	2.4	2088	191	
4.000-5.000	0	398	135	15	0	1335.6	395.3	15.3	1355	106	
5.000-7.500	21	340	83	2	69.8	1308.6	321.1	13.8	789	64	
7.500-10.00	0	692	11	0	0	3477.6	11.3	0	381	23	
10.00-20.00	0	293	293	41	0	1463.7	1463.7	7748.8	41	7	
>20.00	0	0	0	0	0	0	0	0	0	0	
all sizes	22	315	99	2	124.4	1069.7	305.6	5.3	139591	5472	
estd. no of opr. holdings (00)	3040	44034	13838	222							
sample no of opr. holdings	123	1471	1325	33							

Source: NSSO70th Round, 2013, https://www.mospi.gov.in/sites/default/files/publication_reports/nss_rep_572.pdf

Table C: Number of Scheduled Tribeshouseholds reporting hen, cock, chicken, duck, and other birds per 1000 households and average number owned per 1000 households by size class of household operational holding

All India	no. per 1000 of hhs reporting owning of			average number (0.0) owned per 1000			no of opr. holdings	
	size class of hh operational holding (ha)	hen/cock/Chicken	duck	other bird	hen/cock/chicken	duck	other bird	estd. (00)
1	2	3	4	5	6	7	8	9
nil	0	0	0	0	0	0	0	0
>0.000 & ≤0.002	575	0	0	2299.5	0	0	14	4
0.002-0.005	487	70	0	4981	2044.5	0	1449	108
0.005-0.040	380	6	1	1702.8	12.6	3.9	8267	143
0.040-0.500	344	11	3	3226.5	41	68.5	46128	948
0.500-1.000	512	31	6	3603.6	165.1	30.3	42260	1058
1.000-2.000	489	28	12	9032.3	142.9	73.9	27347	1816
2.000-3.000	423	61	9	3451.6	332.7	47.5	9473	1004
3.000-4.000	506	39	0	4628.4	162.3	0	2088	191
4.000-5.000	385	18	0	5824.5	150.9	0	1355	106
5.000-7.500	412	18	0	3094	84.2	0	789	64
7.500-10.00	453	0	177	7036.5	0	1768.1	381	23
10.00-20.00	293	0	41	585.5	0	81.6	41	7
>20.00	0	0	0	0	0	0	0	0
all sizes	436	25	6	4476.3	140.4	54.6	139591	5472
estd. no of opr. holdings (00)	60806	3435	869					
sample no of opr. holdings	2987	311	65					

Source: NSSO70th Round, 2013, https://www.mospi.gov.in/sites/default/files/publication_reports/nss_rep_572.pdf