

## IMPACT OF LIVESTOCK SECTOR FOR RURAL POVERTY ALLEVIATION IN CHITTOOR DISTRICT

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### ABSTRACT

*Livestock sector plays avigorous role in socio-economic progress of rural families. Livestock rearing has substantial optimistic influence on equity in terms of employment, income and poverty lessening in rural zones by way of dispersal of livestock is more democratic as compared to land for agriculture purposes. In Andhra Pradesh, more than 5 percent of the rural households 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 due to their low initial investment and operational costs. In the recent decade, demand for various livestock based products has increased considerably due to rise in per capita income, urbanization, taste and preference and increased awareness about food nutrition. Livestock sector is likely to arise as an appliance for agricultural progress in the coming years. This study only confined to Sree Rangaraja Puram Mandal in Chittoor District of Andhra Pradesh. In this paper author will make an attempt to analyses the performance of livestock sector in terms of livestock population, production, employment and income on one hand and the role of livestock sector in reducing rural poverty on the other. The study will also highlight the various major problems facing by the people those who are engaging in livestock sector in Sree Rangaraja Puram Mandal of Chittoor district.*

**Keywords:** *livestock sector, poverty, employment, income, households*

### INTRODUCTION

Persistent hunger and underfeeding remain a foremost problem today in various parts of India. According to Fan (2014) about 842 million people or one in eight people globally go to bed hungry every day. In addition, about 2 billion people suffer from 'hidden hunger' or deficiency of essential nutrients like iron, vitamins and zinc. On other hand, population of India is increasing at pace and it is projected that by 2020 it will reach to 130 crore. It is expected that demand will increase and India need more food. More possessions will be looked-for along with diversified strategies to support the decreasing livelihoods.

Livestock not only holds potential to be income generating source but also viable solution to poverty, malnutrition and hunger. In India about 70 percent people residing in rural areas are directly or indirectly dependent on livestock sector for their livelihood. Benefits of livestock sector are multifaceted. Livestock holds the potential to reduce poverty, hunger and food insecurity through provision of quality food and income generating source. Shahid *et al.* (2013) extended the contribution of livestock towards income, transportation, drought power and also the source of renewable energy and fertilizer for the agriculture. Ultimate purpose of livestock rearing and livestock management practices is to earn income for the livelihood sustainability as income generated help in improving livelihoods (Butler *et al.*, 2007). Ali (2007) presented that livestock is providing income to 675 million farmers around the globe having full dependency on livestock sector. Livestock is helping the rural at micro level for their uplift.

Livestock sector plays an important role in Indian economy and is an important sub-sector of Indian Agriculture. The contribution of livestock to Gross Domestic Product (GDP) was Rs. 4.06 lakh Crore and 3.88 percent in 2013-2014 at 2011-2012 prices. This is the sector where the poor contribute to growth directly instead of getting benefit from growth generated elsewhere. The overall growth rate in livestock

sector is steady and is around 4 to 5 percent without adequate investment in the sector. Among rural households, ownership of the livestock is more evenly distributed than land and other assets. The progress in the sector results in balanced development of the rural economy particularly in reducing the poverty amongst the socially and economically weaker section. The rural women play a significant role in Animal Husbandry and are directly involved in most of the operations relating to feeding, breeding, management and healthcare of the livestock.

Census data revealed that India accounts for 20 percent of the world's goat population with annual growth rate of 1.6 percent (AH&D, 2005). During the period from 1951 to 2012, there has been a growth of 155.3 to 190.9 million in the cattle population and 43.4 to 108.7 million in buffalo population whereas the population of sheep increased by 39.1 to 65.1 million and those of goat and poultry increased by about 47.2 to 135.2 and 73.5 to 729.2 million respectively (NDDDB, 2015). The reasons for high growth rate in number of small ruminants are low cost and handy technology to the landless labourers, marginal farmers and industrial workers and requirement of less volume of feed, more resistant to diseases, easily manageable by child or female and easy market accessibility.

Crop farming is the major source of income in rural areas in India especially in Andhra Pradesh. However, climate change, insufficient rain fall, increasing cost of production, low productivity, non-availability of expected price for their agricultural output and larger conversion of farm land into non-farm activities in Andhra Pradesh are limited to support peoples' livelihoods. The same situations are happened in recent past in Chittoor district of Andhra Pradesh. So under these circumstances some of the people of rural areas are more depending on livestock activity in Chittoor district. Livestock farming is also significant sector supporting the livelihoods of farmers in multiple manners in Chittoor district.

Livestock sector offers food in the form of milk and meat and other products. Food is the essential necessitate of human beings and food industry is at the top among the industries in the world (Khalil, 2007; IFCN, 2010). Food shortage is a big challenge being faced by the developing and backward countries particularly in rural India. Livestock products have a main contribution in fulfilling food requirement through protein and fats in milk, meat other livestock products. Hence, to amplify the livestock production among livestock growers and to tackle food shortage and dwindling livelihoods, it is inevitable for livestock farmers to rethink and adopt site specific and advanced livestock production practices. In this context present study was conducted to investigate the potential of livestock in uplifting rural livelihoods in Sri Rangaraja Puram Mandal of Chittoor district in Andhra Pradesh only. The study has the following objectives: 1) to study the demographic features and ownership of land of sample respondents in Durgaraja Puram village; 2) to assess the methods of livestock farming and income status of sample respondents in study area; and 3) to analyse the impact of livestock on socio-economic aspects of sample respondents in Durgaraja Puram village.

## **RESEARCH METHOD**

### ***Study area and selection of sample***

The study was conducted at Durgaraja Puram Village in Sri Rangaraja Puram Mandal of Chittoor district only. Almost in all the revenue villages in the district as well as in the mandal livestock is reared and denoted as one of the major income generating source. Census method sampling technique was used for the selection of sample in the village. There are total 90 households in Durgaraja Puram village of Sri Rangaraja Puram Mandal. Out of the total 90 households in Durgaraja Puram village, 90 households were selected for study. A complete list of livestock producers was obtained from the office of District Officer Agriculture and Animal Husbandry and this list acted as sampling farmer supporting selection of livestock producers.

### ***Data collection and analysis***

Study was quantitative and for the sake of data collection interview schedule was prepared as research instrument. After the validity and reliability assessment instrument was ready for the final data collection. Researcher personally conducted the face to face interviews. Livestock keepers were approached at their farms and homes. In addition, observations and informal discussions were also carried out for the data validation and triangulation. Collected data were analyzed by using appropriate statistical techniques.

Considering the nature of data simple frequencies and percentages were determined. Mean and standard deviation were also measured for better knowledge.

**Limitation of the study**

The study was completely based on primary data sources. The present study was confined to study the role of livestock activity and its impact on poverty alleviation in rural areas in Sri Rangaraja Puram mandal in general and Durgaraja Puram village in particular only. Also the study includes different livestock activities done by the sample respondents in the study area are analysed collectively not activity wise.

**RESULTS AND DISCUSSION**

Table 1 shows that 45.56 percent livestock producers were falling in the age group of 31-45 years. 13.33 percent of respondents were of up to 30 years age implying reduced involvement of young cultivators in agriculture and livestock keeping. A literacy level of sample respondents in the village was somewhat satisfactory as about 40 percent farmers were educated up to metric level and only 21.11 percent of the sample respondents are educated above higher secondary. However, majority of them were old aged in Durgaraja Puram village.

Out of total 90 sample respondents, majority of the farmers are small farmers having land holding in range of 2.6 - 5 acres (Table 2). Overwhelming majority 34.44 of farmers were marginal farmers' possessing land less than 2.5 acres. Sound majority 74.45 of livestock producer was owner of their lands where they were cultivating different crops like sugarcane, mango, as commercial crops and paddy, groundnut and vegetables according to their domestic demands in the village. Today, with the increasing requirements, desire of getting more income is escalating. No wonder, capital is a key towards development and uplift of any domestic or commercial initiative. Among resource poor farmers' capital does matter a lot as they have unbending dependency on farming.

Table 1. Demographic characteristics of the sample respondents

Sl. No	Demographics		Literacy Levels	
	Age (Years)	Frequency	Education	Frequency
1	Up to 30	12 (13.33)	Primary	21 (23.33)
2	31-45	41 (45.56)	Matric	36 (40.00)
3	46-60	20 (22.22)	Higher Secondary(+2)	14 (15.56)
4	Above 60	17 (18.89)	Above +2	19 (21.11)
Total		90 (100.00)	Total	90 (100.00)

Values in the brackets indicate percent of the respondents

Source: Field survey

Table 2. Land particulars of the sample respondents

Sl. No	Land Possession		Tenancy System	
	In Acres	Frequency	Type	Frequency
1	Up to 2.5	31 (34.44)	Owner	67 (74.45)
2	2.6 – 5	40 (44.45)	Owner – cum -Tenant	13 (14.44)
3	5.1 – 10	13 (14.44)	Tenant	7 (7.78)
4	Above 10	06 (6.67)	Sub-Tenant	3 (3.33)
Total		90 (100.00)	Total	90 (100.00)

Values in the brackets indicate percent of the respondents

Source: Field survey

Data depicted that all farmers were using livestock as income source completely or partially in Table 3. About 34.44 percent farmers declared livestock farming as full fledged income source while 47.78 percent farmers' mutually described livestock as income source but partially. These farmers were also connected with other businesses as well like crop farming and private business. Draught, transport and milk are the most noteworthy income sources as resulting from livestock (Campbell et al., 2002). Ultimate purpose of livestock rearing and livestock management practices is to earn income for the livelihood sustainability as income generated help in improving livelihoods.

In study area domestic and commercial livestock farming was enabling farmers to earn more profit through selling the byproducts like milk, ghee and dahi, animal manure and marketing of animals. Based on the research work income from livestock is significant element of household income in Durgaraja Puram village of Sri Rangaraja Puram Mandal in Chittoor district. In context of results, slightly less than half respondents were adapting domestic as well as commercial livestock farming system. Moving forward, about 30 percent respondents were limited to the domestic livestock farming system. During informal discussion and observation it was seen that poverty, limited resources and reduced adaptive capacity of the farmers were major reasons to resist their farming to domestic level in the village. On the other hand, farmers adapting commercial livestock farming system are large farmers with strong family background and risk adverse adaptive capacity. Also the study told one more thing that is 13.33 percent of sample respondents in the village are depend upon tenant livestock rearing system to save their families from poverty conditions. Reasons behind the situation, deficient physical and health conditions of the people, also the availability of land is not suit for agriculture even the land is not suit for animal rearing also because the land is completely drought land.

Informal discussions were held with respondents in Durgaraja Puram village to probe the realities and it appeared that on average farmers were earning Rs. 5001-10000 for small farmers while for progressive farmers earning probed was greater than Rs. 15000. Major mode of earning was milk selling and marketing of animals and manure. Quantitative data collected shown that majority of farmers 38.89 percent were earning monthly income up to Rs. 5000 (Table 4). About 33.33 percent farmers were getting earning between Rs. 5001 – 10000 income range while 21.11 percent of the livestock keepers are in the range of Rs. 10001 – 15000 income group level and only 6.67 percent of the livestock farmers were able to earn greater than Rs. 15000 being progressive farmers in the village. It was observed through informal methods and observations that the few small farmers were also included among the farmers earning Rs. 10001 – 15000 because of implementation of decent farming practices.

Data also revealed that farmers were getting income from the livestock farming but of varied level because of geographical location, adoption of recommended practices, number of animals and breeds of animals (Table 4). For, example, milk selling could be anticipated as major income source in livestock activity in study area. One of the livestock keeper in the village cited that "I am getting enough income for my family uplift from milk marketing, sale of animals and manure". Sample respondents in Durgaraja Puram village also mentioned that Dhodla, Jersey and Sivasakthi dairies are the major firms to purchase milk from their farms through their milk procurement agents, which was profitable but the milk agents follows some malpractices which led to income loss of milk producers. Furthermore, 4.44 percent respondents were of the view that livestock is not having enough impression in fulfillment of domestic needs. On contrary, 32.22 percent farmers recognized maximum contribution in domestic needs fulfillment (Table 5).

Table 3. Income source and nature of livestock farming of sample respondents

Sl. No	Income source		Nature of livestock farming purpose	Frequency
	Major Source	Frequency		
1	Livestock farming	31 (34.44)	Domestic	27 (30.00)
2	Livestock and crop farming	43 (47.78)	Commercial	08 (8.89)
3	Livestock and services	11 (12.22)	Domestic and commercial	43 (47.78)
4	Livestock, crops and services	05 (5.56)	Tenant livestock farming	12 (13.33)
Total		90 (100.00)	Total	90 (100.00)

Values in the brackets indicate percent of the respondents

Source: Field survey

Table 4. Monthly income statuses of sample respondents from livestock activities

Sl. No	Income level/Month In.Rs (Gross)	Frequency
1	Up to 5000	35 (38.89)
2	5001 – 10000	30 (33.33)
3	10001 – 15000	19 (21.11)
4	Above 15000	06 (6.67)
Total		90 (100.00)

Values in the brackets indicate percent of the respondents  
 Source: Field survey

Table 5. Opinion of sample respondents in fulfilling their domestic needs through income received from livestock

Sl. No	Response	Frequency
1	To little extent	04 (4.44)
2	To some extent	12 (13.33)
3	To an average extent	21 (23.33)
4	To greater extent	29 (32.22)
5	To much extent	24 (26.68)
Total		90 (100.00)

Values in the brackets indicate percent of the respondents  
 Source: Field survey

Livestock farming is assumed as business providing income to sustain the routine life in Durgaraja Puram village with the increasing needs, demand is increasing. To fulfill increasing demand multiple source are essentials likewise, along with crop farming. Livestock farming is one of the feasible sources to increase income levels of the poor in the village and it will help to overcome the poverty situations in rural areas.

Formal conversation exposed that livestock activity ensued to be the source of empowerment particularly for the rural people in Sri Rangaraja Puram Mandal in Chittoor district (Table 6). Efforts at center and state level are being made to enhance the empowerment of rural people especially women with the objective of Millennium Development Goals (MDGs) depict the notion of empowering women to reduce poverty and food insecurity. Especially empowerment is an issue in rural areas like Durgaraja Puram village in Sri Rangaraja Puram Mandal where livestock is working as source of empowerment playing role in enhancing financial status and reducing poverty. Livestock farming was strengthening family income by providing capitals in the form of selling of products, by-products and living animals in Durgaraja Puram village of Sri Rangaraja Puram mandal. However, inadequate market existence was perceived as difficulty during informal debates with farmers in the village. Fulfillment of food necessities through livestock farming was 3<sup>rd</sup> top priority of the farmers. Persisting food insecurity and under nutrition situation implies that livestock sector needs more improvement to handle these challenges not only on micro level but also on macro level.

Table 6. Opinion of the respondents on the contribution of livestock keeping towards socio-economic aspects

Sl. No	Socio-Economic Aspects	Frequency					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
1	Living standard	6 (6.67)	12 (13.33)	19 (21.11)	29 (32.22)	24 (26.67)	90 (100)
2	Education of the children	2 (2.22)	8 (8.90)	31 (34.44)	30 (33.33)	19 (21.11)	90 (100)
3	Empowerment	11 (12.22)	17 (18.89)	22 (24.44)	23 (25.56)	17 (18.89)	90 (100)
4	Family income	2 (2.22)	5 (5.56)	27 (30.00)	31 (34.44)	25 (27.78)	90 (100)
5	Health	8 (8.90)	5 (5.56)	25 (27.78)	33 (36.66)	19 (21.11)	90 (100)
6	Food requirements	4 (4.44)	6 (6.67)	19 (21.11)	26 (28.89)	35 (38.89)	90 (100)

Values in the brackets indicate percent of the respondents  
 Source: Field survey

## **CONCLUSIONS AND SUGGESTIONS**

### ***Conclusion***

The study concluded that livestock activity is essential towards development of rural areas particularly the areas like Durgaraja Puram village of Sri Rangaraja Puram Mandal in Chittoor district. Farmers in the village possessed livestock as one of the leading income producing source after agriculture to support their financial uplift and it is the best sector to overcome the losses from agriculture. Farmers in study area were earning income in between Rs. 5000 and Rs. 15000 while in few cases income exceed Rs. 15000. This income was being spent on education, health, nutrition food requirements and some on domestic equipment. Livestock appeared to play role in improving empowerment and reducing poverty in the village. However, socio-economic condition of farmers was found meager and need to be improved by enhancing their adaptive capacities. Livestock deem to provide food and money, serving as savings for rainy days, ceremonial utilization and empowerment to the whole family in the village. Livestock keepers in Durgaraja Puram village should be given an opportunity to get training on livestock management, livestock marketing and acquisition of relevant information from livestock facilitators. Livestock Extension services should be transformed to the livestock keepers and organizers must be prepared with latest technologies for information spreading.

### ***Suggestions***

1. In study area most of the respondents are not higher educated, so it is necessary to give training regarding to livestock activities and enhancing producer's ability to act on their own behalf.
2. Improving access to shared resources among the villagers.
3. In study area there is no availability of medical services for animals, so establishing and enabling proper animal health sector reforms.
4. In livestock sector there is a need to reducing local political intervention and increasing healthy competition among livestock farmers in the study area as well as in district.
5. Improving feed and fodder, researching markets and breeding for improvement of livestock sector not only in study area but also in Chittoor district.

## **REFERENCES**

- AH&D. 2005. Annual Reports 2004-2005. Department of Animal Husbandry & Dairying (AH&D), Ministry of Agriculture, Government of India, New Delhi
- Ali, J. 2007. Livestock sector development and implication for rural poverty alleviation in India. *Livestock Res. Rural Development* 19(2): 245-257.
- Butler, S.J., J.A. Vickery, and K. Norris. 2007. Farmland Biodiversity and the Footprint of agriculture *Science* 315(5810): 381-384
- Campbell, B.M., S. Jeffrey, W. Kozanayi, M. Luckert, M. Mutamba and C.S. Zindi. 2002. Household livelihoods in semi-arid regions: Options and constraints. Center for International Forestry Research (CIFOR), Bogor, Indonesia .
- Fan, S. 2014. Food Policy in 2013: Nutrition Grabs the Spotlight as Hunger Persists. In: IFPRI's 2013 Global Food Policy Report (pp 1-14). International Food Policy Research Institute (IFPRI) March 12, 2014. Retrieved from [www.ifpri.org/publication/2013-global-food-policy-report](http://www.ifpri.org/publication/2013-global-food-policy-report)
- IFCN. 2010. Status and trends in milk production world-wide, A summary of results from the IFCN Dairy Report 2010 (pp 1-6), International Farm Comparison Network. Retrieved from <http://www.ifcndairy.org>.
- Khalil, J.K. 2007. Food security with special reference to Pakistan, HEC, Islamabad, Pakistan 1: 1-202.
- NDDDB. 2015. Livestock population in India by Species. National Dairy Development Board (NDDDB), Gujarat, India. Retrieved from <http://www.nddb.org/information/stats/pop>
- Shahid, A., Saghir, A., Ashraf, I. and Ashraf, S. 2013. Livestock sector as income source to mitigate energy crisis, with the emphasis on Pakistan. *Global Veterinaria* 11(6): 701-707.