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SOCIO-ECONOMIC FACTORS AFFECTING PARTICIPATION OF WOMEN IN LIVESTOCK FARMING: REVIEW

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Abstract: Livestock rearing is an indispensable part of the rural community, especially for small and marginal farmers. Livestock farming involves a low amount of risk as compared to agricultural farming. In India where agriculture is majorly dependent on climatic conditions. Livestock rearing gives a ray of hope, as per the 20th Livestock Census, 2019 All India Report, the total population of livestock in rural areas has increased by 4.56 percent, the sector contributes 4.11 percent of total gross domestic product and 25.6 percent of total agriculture GDP (AgGDP). This sector employed around 20.5 million people in India. The sector is unique in terms of employment opportunities as it is a landless productive asset for the female workforce in rural areas. In India, Livestock production engages the largest share of the self-employed female workforce, 69 percent of the rural female workforce engage in Livestock management activities (Ali, 2007). Livestock allied activities are mainly handled by the female. Young girls are also engaged in the activity of grazing sheep, goats, etc. India is highest producer of milk with a 20.17 per cent share in the global production of milk, has the largest population of milch animals in the world (APEDA, 2018). The credit for India's status as the highest milk producer can be accredited to the illiterate women farmers of India. In light of available literature, the review aims to identify the socio-economic profile of women in livestock farming in India and to evaluate the role of the livestock sector in rural opportunities to the rural women contributing in the economic activities in India.

Index Terms: Agriculture, Livestock, Women

I. Introduction

Livestock rearing is an indispensable part of the rural community. Livestock farming involves a low amount of risk as compared to agricultural farming. In India where agriculture is majorly dependent on climatic conditions. Livestock rearing gives a ray of hope, this sector provides a source of extra income to the farmers in the lean period, help in emergencies like marriages, renovation of houses, education of children, treatment of a diseased person, etc., and acts as an insurance in the condition of crop failures too. Besides generating extra income, livestock products also provide nutritional security to the farmers.

As per the 20th Livestock Census, 2019 All India Report, the total population of livestock in rural areas has increased by 4.56 percent, the sector contributes 4.11 percent of total gross domestic product and 25.6 percent of total agriculture GDP (AgGDP). This sector has been growing at a CAGR of 7.9 per cent in the last five years.

Livestock holdings are more equally distributed than the Landholdings in India (Birthal & Taneja, 2012; Ali, 2007). and this makes livestock a more popular occupation among small and marginal farmers. Livestock output in India has been growing at a faster rate as compared to the crop sector (Chand & Raju, 2008). Livestock has become a source of secondary income for rural households in India.

The sector is unique in terms of employment opportunities as it is a landless productive asset for the female workforce in rural areas. In India, Livestock production engages the largest share of self-employed female workforce, 69 per cent of the rural female workforce engage in livestock management activities. Livestock allied activities are mainly handled by the female from managing, marketing, feed gatherers, acting as caretakers, and birth attendants of cattle. Young girls are also engaged in the activity of grazing sheep, goats,

etc. India is the highest producer of milk with a 20.17 per cent share in the global production of milk, has the largest population of milch animals in the world (APEDA, 2018), which leads to a greater share of livestock products in exports. In livestock rearing and dairy based activities, their involvement is much higher than their male counterparts. Their role ranges from managers to landless laborers. There are numerous activities performed by women in dairy farms which includes care of newborn baby, cleaning of animal, milking, washing utensils, weaning, and management of calf, preparing of cow dung cakes, etc.). The credit for India's status as the highest milk producer can be accredited to the illiterate women farmers of India. Participation of women in livestock rearing activities could not be captured adequately by official surveys of India. Female labour force participation is only 25.3 per cent for all age groups and 37.8 per cent for the age group of 15-59 years. 59 per cent were self-employed and 75 per cent were employed in the agriculture sector among all rural female workforce (NSSO, 2013). Despite handling activities on large scales, the work done by women are considered unproductive, underestimated and more importantly unrecognized which leads to many issues such as lack of accessibility of capital and knowledge, ownership of property rights, act as unpaid labour, lack of decision making about the price of selling and purchasing of cattle, etc. Livestock production is largely the domain of women and a dynamic livestock sector will aid in their socio-economic empowerment (Birthal et al., 2012).

In light of the above facts and statements given by different researchers, the present paper will identify the socio-economic profile of women in livestock farming in India and evaluate the role of the livestock sector in rural opportunities to the rural women to contributing to the economic activities in India.

II. Methodology

The study is designed to identify the role and participation of women in livestock activities in rural India. This study is based on secondary literature and various published sources like Livestock census, Directorate of economics and statistics, census reports, reports of Animal Husbandry Statistics Division, Dept. of Animal Husbandry, Dairying, and Fisheries, M/o Agriculture, GoI, and FAOSTAT production data employment and unemployment survey. The evaluation is done based on of different socio-economic factors e.g., landholding size of the farmers (marginal, small, medium, and large landholdings), social status (Scheduled caste, scheduled tribe, Other backward castes, and others), Age, Education, Decision making, Migration of male member of the family, Family size, Knowledge and Nutrition status.

III. Factors affecting female participation in livestock rearing activities

3.1 Landholding size: Landholding size in India is broadly divided into different categories. Marginal landholdings, small landholdings, medium landholdings and large landholdings. In India, the majority number of livestock owning households are small, marginal, and landless. The landholding status of rearers reveals that maximum rearers are landless, marginal and small landholders" (Khan et al., 2013). Small animals like sheep, goats, pigs, and poultry are largely kept by small households (Ali, J.). Landless and small peasants own less livestock than households in higher size classes of landholdings (Birwal, D. 2017). Consequently, the impact of livestock rearing is greater for the people belonging to low economic status (Khan et al., 2013). Small and marginal landowners are associated with small ruminants due to less amount of capital is required for small animals. Whereas large animals like buffalo and cattle which seek a large amount of investment are reared by large landowners. Livestock provides manure for farm activity and crop residue uses as fodder for livestock. On the account of inter-linkages of these two occupations, this has been seen that the large number of herds owned by large land owners.

Figure: Ownership and distribution of livestock across landholding size classes

Landholding-size class	Share in land area	Number (% share) of households	Households owning (%)							
			All or any livestock species	Cow	Buffalo	Draft animal	Sheep	Goat	Poultry	Other livestock
Landless	0.00	6989 (35.57)	36.47	12.94	13.95	7.18	20.22	16.41	17.31	14.51
Marginal (<1 ha)	15.66	7044 (35.85)	74.93	37.49	28.51	35.87	40.86	35.32	47.34	33.21
Small (1-2 ha)	17.43	2633 (13.40)	82.72	17.99	18.67	22.20	14.57	17.58	16.36	18.42
Medium (2-4 ha)	23.15	1806 (9.19)	86.21	16.60	18.46	19.36	13.06	15.02	11.08	16.66
Large (>4 ha)	43.76	1178 (5.99)	88.20	14.98	20.41	15.39	11.28	15.68	7.90	17.20
Total		19650	64.13							

Source: Jumrani & Birthal, 2015

The size of livestock holdings increases with the increase in the operational holdings, but livestock intensification declines with it (Suresh et al., 2008). These results are in line with (Jumrani & Birthal, 2015) which shows the negative relationship between livestock income and land size and established that livestock is relatively an important source of small landholders. There was some contradiction recorded by (Iqbal, 2010) that showed the participation of women in animal husbandry was highest among landless women. The landless households only hold small animals like sheep and goats as they feed on common land and do not require the purchase of the residue (Hazari & Kumar, 2003).

3.2 Social group: Indian society is divided based on castes of individuals. The significance of livestock rearing is directly reflected by the share of people involved. Among the total rearers, OBC's has the largest share (49.52 per cent), followed by high caste (26.61 per cent) and Scheduled castes (23.85 per cent) " (Khan et al., 2013). These results are in line with (Jain et al., n.d.) and (Iqbal, 2010) and are in contradiction with (Suresh et al., 2008) which says the distribution of farmers by caste revealed that nearly half of the livestock farmers belong to OBC. The Scheduled caste and tribe (SC/ST) accounted for nearly 15 per cent each and the rest were in a different category (Suresh et al., 2008). And results by (Ahmad & Humanities, n.d.) states that the population of scheduled caste is the highest is in engagement of livestock activities. The women from high castes are much educated and they have restrictions to stay in the house so their share is high in animal health care services and low in the activities like bringing fodder for animals, management activities, etc. (Ahmad & Humanities, n.d.). In India, the share of Livestock produce by an underprivileged group of society is from 70 to 80 per cent.

Number per Thousand Cultivator Households Reporting Ownership of Livestock and Value of Livestock* Asset per Household

Social Group	Per Thousand Households Reporting Asset	Average Value of the Livestock (₹)
SC	687	29,661
ST	805	24,994
OBC	723	34,683
Others	716	36,278
All	727	32,813

Source: Sarkar, A (2020)

Upper and intermediate caste households have larger holdings of buffaloes whereas the SC households have larger holdings of goats and sheep (Hazari & Kumar, 2003). The work related to livestock husbandry and done by Scheduled caste is not accepted by the higher social groups (Iqbal, 2010). For solving these kinds of problems, rural households found ways of informal contract farming in many parts of the country. One of the contract farming can be seen in Bhatsana village of Haryana, where large cultivators used agreements to mobile labour for looking after calves and dry animals, and with the help of these agreements economically and socially backward households get some opportunity to earn some extra income (Birwal, D. 2017).

3.4 Age: Middle aged women spend more time on fields or taking care of livestock than little and old age women. Young girls are seen in grazing activities of sheep, goats, etc. and older women are restricted by their poor health conditions. In contrast with this, "more than half of women engaged in livestock are from young

age group followed by middle and old age women. The reason for more engagement of young females is their physical exertion and self-employment (Devaki et al., 2015) but these results are in contradiction with (Vijay Avinashilingam et al., 2018) found in the study that the majority of the respondents (36.66 per cent) belonged to the old aged group (>55).

3.5 Education: Illiterate women spend comparatively more time on livestock and farm activities than the literate ones. It has been shown by studies, there is a negative correlation between the level of education and time spend on farm activities by women. Women having secondary level education were seen in other household or management work. The People engage in livestock rearing are generally illiterate or possess a very low level of literacy. Thus, it is an activity that is not preferred by the educated class (Khan et al., 2013). These results are in line with (Suresh et al., 2008) which claim that the literacy of the farmer is the most important factor which determines the level of adoption of cross breeding technology. The literacy of farmers was positively associated with the number of buffalo, crossbred cattle, and bovines whereas negatively associated with local cattle, goats, sheep, and small ruminants in general along with camel and draft animals (Suresh et al., 2008). Female workers, particularly the illiterate ones, outnumber the male workers involved in animal care (Jumrani & Birthal, 2015).

3.6 Decision Making: Decision making is a process in which males are dominated in the household as well as farm and livestock activities. The decision regarding sell and purchase of animals, getting a loan, selling of fodder, selling of animal products is majorly taken by the male member of the house (Mishra et al., n.d.). The husband is recessive in decision making regarding animal husbandry (Chauhan and Thakor 2006). In tribal areas, women do not play the primary role in decision making regarding farm management but important decisions concerning animal husbandry were dominated by females only (CHAUHAN, 2012). (Kushwaha et al., 2020) stated in their study that more or less all respondents were partially involved in all decisions like selling of milk and calves etc. but not at all involved in a decision like getting veterinary aids and AI facilities etc.

3.7 Migration of males: Migration of male members of the household enables the female members more empowered for decision making of farm as well as livestock activities. In the absence of a male counterpart (husband/ son), all the responsibilities of the family are borne out by the women only. "The change of women's role was more evident in nuclear family households where husbands have migrated. In joint families, migration did not have much influence on the role of women, because the head of the joint family generally takes the responsibility of decision-making" (Singh et al., 2013).

3.8 Family size: Studies revealed that women who live in nuclear families or members of less than five are highly active in livestock rearing activities than that of joint families. "Majority of farm women had nuclear family, more than half of farm women have less than five members in their family" (Devaki et al., 2015). Small animals like sheep, goats, and pigs, and poultry are largely kept by small households (J Ali, 2007). In contrast, (Suresh et al., 2008) reported that the joint family system was a dominant settlement of sheep rearers because more members could manage larger flocks.

3.9 Knowledge: Despite the majority of work done by women, their knowledge regarding new technology and innovation, housing and sanitation, and breeding techniques is limited. "Rural women were not performing most of the activities related to the breeding of animal production except those which were related with the parturition of the animals" (Singha & Niwasb, 2012) or performance of women in breeding activities and health care activities was either low or very low (Jain et al., n.d.). Rural Women lack in adapting new technology due to illiteracy, social restrictions etc. but they have an abundance of traditional knowledge which they use in day-to-day practice. More than 50% of knowledge holders participated in network meeting in West Bengal were women (Ravikumar et al., 2016). Women knowledge holders can learn under difficult social situations and demonstrated their ability to participate socially. Women livestock farmers are more aware of the aspects like deworming, vaccination, animal shed management, etc. (BAIG et al., 2016).

3.10 Nutritional value: Livestock products are one of the important sources of nutrition among rural areas for large farmers but for small and marginal farmers, products obtained from animals are just a source of extra income. The first purpose to keep the livestock is to obtain milk to sell that provides an additional source of income (Biradar et al., 2013). Backyard poultry farming provides year-round protein-rich food at a relatively low cost to the family (Kumar et al., 2018).

IV. Conclusion:

Women play a very significant role in livestock rearing in rural India. It won't be wrong if we say the livestock sector is feminized and the participation in this activity can be seen from dawn to dusk. The majority of the women who engaged in this sector come from a low social and economic background, they were illiterate, lack the ability of decision-making regarding selling and purchasing animals but some tribal women had little freedom in the decision-making of selling of the products. The main objective for rearing animals in poor and marginal families is to get some extra income not to get some nutrition for the family. Some sort of caste discrimination practices was also recorded which becomes a hindrance in earning for the family. This has been noticed that there is some difference in actual work done by women in the field and the work which has been recorded in the official structure. There is a need to correct these inequalities and provide some strength to women in negotiating their wellbeing.

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