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Livelihood status of dairy farmers with a reference to socio-economic analysis in Manipur

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Abstract

The present study analyzed the socio-economic profile of dairy farmers in Imphal West district of Manipur. Dairying employs 70 million rural households, the majority of those are marginal and landless labourers. An improvement in the socio-economic status of a dairy household reflects the condition of an economy. The salient findings indicated that dairy farming was more preferred employment for male respondents than female respondents, and a large percentage of them are above 45 years old. Almost 88.89 per cent of respondents were educated. Majority of them belong to Hindu religion (51.85%) and OBC (44.44%) social group in the study area. Household ownership of cattle were slightly higher in local cows than in crossbred cows and experience in dairy farming was found to be 11.69 years. Cattle rearing (100%), participation as a beneficiary of schemes (92.59%), livestock trading (80.25%), crop production (83.95%) and business (58.02%) were the most prominent livelihood activities of the household.

Keywords: Livelihood, dairy farmers, socio-economic condition and Manipur

1. Introduction

Livestock is the important pillar of agriculture that contributes in a diverse way to the emerging Indian economy in the world. About 20.5 million farmers are engaged in the livestock enterprise which supports the livelihood of two-thirds of the rural sector in the country. The dairy sector alone takes care of the livelihood of about 10 million people connected by the existing one lakh dairy cooperative organization (Livestock census, 2012) [4]. There has been tremendous development over a period in the dairy sector. It can be seen through the rapid expansion in annual milk output, which rose from 21 million tonnes in 1970–1971 to 209.96 million tonnes in 2021–2022, as well as the growth in per capita availability of milk from 112 grams per day in 1970-71 to 427 grams per day in 2021-22. This emphasizes that for the growing population, milk and dairy products would continue to be available and accessible (GoI, 2022) [2]. Evaluation of socio-economic profile was the measurement of the social and economic position of respondents in society (Prasad *et al.*, 2019) [5]. Farmers are typically from the lower socio-economic class of society and their land holding tends to decrease with the increase in farm size from the range of small to large besides, the success of crop production is determined by several natural factors such as adequate rainfall, temperature, and seasonal variations. The variations in weather patterns and the environment have an adverse effect on agriculture production that directly impacts farmers' livelihood thus, the farmers were in a vicious cycle of poverty and unemployment. Dairy is indeed a cost-effective remedy for the agricultural sector's crop failure and a powerful tool for enhancing the socioeconomic status of the farmers. It augments the family's food and nutrition basket while also providing gainful employment. Therefore, dairy enterprises are seen as a means to solve rural-urban migration and alleviate poverty by providing an alternative source of income to the marginal, small, and landless farmers in the country.

2. Materials and Methods

2.1. Description of the Study Area

India has the largest population of dairy animals in the world owing to favourable climatic conditions. North-Eastern region (NER) of India has abundant natural resources which ideal for dairy farming. Agriculture was the principal occupation that determines the livelihood of about 85 per cent of the rural members in the NER and livestock was an intrinsic part of a mixed agricultural farming system (Kumar *et al.*, 2007) [3]. Most of the livestock animals are in the hands of small farmers and it has been reported that a larger number of livestock farmers were under Below Poverty Line (BPL) category.

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Dairy farming has enormous potential to give an alternative source of income (Feroze *et al.*, 2019) [1]. Therefore, it is necessary to identify the current profile of dairy farmers to enhance the living conditions of households. Socioeconomic studies would help to find out the besetting problems in the practice of dairy farming. Hence, the present study was conducted in the Imphal West district of Manipur state with the objective of exploring the socioeconomic framework of a dairy household.

2.2. Data Collection

The present study was carried out in Imphal West district of Manipur. The districts, blocks and villages were selected purposively by utilizing a multistage sampling technique. The respondents were chosen randomly by using simple random sampling without replacement technique. Out of four blocks in the district, Patsoi and Wangoi block were selected and two villages were selected randomly from each selected block. A list of dairy farmers was prepared, which constituted the sampling frame. From the list, 30% of them were selected and the final sample size of 81 dairy farmers was chosen. Personal interview method was done for collecting data with the help of a pre-tested interview schedule. The collected data were compiled, tabulated, and analyzed to interpret the results by using descriptive statistics i.e., percentage (%), mean and standard deviation.

3. Results and Discussion

The variables associated with sample households were distributed by sex, age, family size, education status, religion, caste, dwelling structure, household assets, land holding, livestock possession, experience, employment, and income activities.

3.1 Household composition

The details about the respondent's household composition are elicited in Table 1. The average household size was found to be 6 members (51.49% of male and 48.51% of female) with the age group above 45 years (46.91%) found to be highest followed by 36-45 years (36.51%) and 26-35 years (13.58%). Dairy farming was preferred to be the main source of income for the sampled respondents because it generated more income than agriculture and required less hired labour. Majority of households reported that they did not hire laborers at all; Instead, women in the household performed a variety of indoor tasks related to raising animals. However, majority of respondents in the age group of 26-35 years reported that they did not have an interest in agriculture because of less profitability in growing crops and their interest was in non-farm activities (Business) in the study area. The sampled respondents' experience ranged from 1 to 45 years, with an average experience in dairy farming of 11.69 years

Table 1: Details of household composition in the study area

Particulars	Category	Frequency	Percentage
Age group	26-35 years	11	13.58
	36-45 years	32	39.51
	above 45	38	46.91
Family size	Male	260	51.49 (3.21)
	Female	248	48.51 (3.06)
	Total	508	100.00 (6.27)

Figures inside the parenthesis indicate mean to the total family size

3.2 Education

Dairy farming was preferred by 25.93 per cent of farmers with a middle level of schooling, while 23.46 per cent of the farmers had primary education, 18.51 per cent had secondary education, 12.35 per cent had higher secondary education and 11.11 per cent were illiterate. In the study region, dairy farming was not a profession for those who were graduate (8.64%). Access to technical information and a rise in milk output was made Possibly by higher levels of education (Table: 2)

Table 2: Educational status of dairy farmers (N=81)

Category	Frequency	Percentage
Illiterate	9	11.11
Primary	19	23.46
Middle	21	25.93
Secondary	15	18.51
Higher secondary	10	12.35
Graduate	7	8.64

3.3. Religion and social group

Table 3: Details of sampled household's religion and social group in the study area (N=81)

Particulars	Category	Frequency	Percentage
Religion	Hinduism	42	51.85
	Meitei	28	34.57
	Christianity	11	13.58
Social group	Schedule tribe (ST)	3	3.70
	Schedule caste (SC)	8	9.88
	Other backward class (OBC)	36	44.44
	General	34	41.98

Table 3 indicates that majority (51.85%) of respondents identified as Hindu, followed by Meitei (34.57%) and Christian (13.58%). A total of 44.44 per cent of the sample respondents belonged to the Other Backward Class (OBC) category, followed by 41.98 per cent in the general category, 9.88 per cent in the Schedule Caste (SC), and 3.70 per cent in the Schedule Tribe (ST).

3.4 Household assets with dwelling type

Farmers primarily using mobile phones for communication; 70.37 per cent of respondents owned a television; 27.16 per cent possessed a refrigerator to store milk and other dairy products, 72.84 per cent and 8.64 per cent of dairy farmers preferred motorcycle and four-wheeler for transportation. Majority of them (62.97%) dwelled in *semi-pucca* structure while (22.22%) had *kaccha* dwelling and the remaining (14.81%) of dairy farmers had a *pucca* dwelling pattern.

Table 4: List of household assets and their dwelling type (N=81)

Particular	Category	Frequency	Percentage
Household assets	TV	57	70.37
	Refrigerator	22	27.16
	Bike	59	72.84
	Four-wheeler	7	8.64
Dwelling type	<i>Kaccha</i>	18	22.22
	<i>Semi-pucca</i>	51	62.97
	<i>Pucca</i>	12	14.81

3.5 Livestock possession

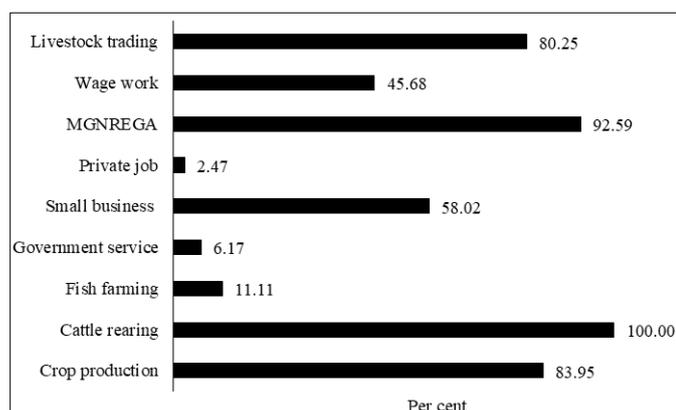
Majority of respondents had a greater number of local cattle than crossbred cattle each households owned an average number of 2.02 local cows followed by crossbred cows (1.83). Majority of respondents (60 to 65%) possessed backyard poultry with an average number of 18.75 chicks and the rest were ducks (9.74 nos.). The local cow (meiteisms) usually produced 1 to 4 litres of milk per day and ranged from 1 to 13 in herd size, whereas, crossbred (Jersey and Sahiwal) produced 5 to 7 and 8 to 10 litres of milk per day respectively. Holstein Friesan cows yielded the highest milk among crossbred animals in the study area which ranged from 15 to 20 litres of milk per day. Majority of dairy farmers possessed an average of 1.44 acre of agricultural land which they used to cultivate paddy for household consumption In Manipur, the land measurement unit was traditionally called Sangam (1 sangam = 0.64 acre).

Table 5: Livestock holding of dairy farmers (N=81)

Category	Frequency	Average
Local cow	63	2.02
Cress bred	40	1.83
Backyard poultry	28	18.75
Duck	28	9.74

3.6 Livelihood activities

Fig. 1 elicits that cattle rearing (100%) and crop production (83.95%) were the dominant ones in on-farm activities while fish farming remains the major living source for 11.11 per cent of household. Additionally, a significant number of households were involved in off-farm activities such as labour workers (45.68%) and livestock traders (80.25%). Among the non-farm activities, participation as a beneficiary of the scheme like MGNREGA (92.59%) was the foremost followed by small business traders (58.02%), private employments (2.47%) and government services (6.17%).



(Activities are mutually inclusive by the sample households)

Fig 1: Livelihood activities of dairy household in the study area

4. Conclusion

Cattle rearing and crop production were the dominant livelihood activities under on-farm activities. Agricultural labour work and livestock trading were the major sources of livelihood activities under off-farm activities. Participation as a beneficiary of schemes like MGNREGA and handicrafts were the foremost livelihood activities under non-farm activities. Households owned more local cows than crossbred cows in the study area. However, the local cow (Meiteism) usually yielded 1 to 4 litres of milk per day, whereas,

crossbred *i.e.*, Jersey and Sahiwal yielded 5 to 7 and 8 to 10 litres of milk per day respectively. Dairy farmers expressed difficulty in obtaining loans from a formal institution for the purchase of crossbred cattle. In this regard, priority sector lending should be used to strengthen the extension of credit facilities to the farming community in the sampled village. This would be favourable for the enhancement of household's socioeconomic status through the development of animal husbandry.

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