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Socio-Economic Profile of Pulikulam Cattle Rearers in Madurai and Sivagangai Districts of Tamil Nadu, India

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A B S T R A C T

The present study was conducted to ascertain the various profile characteristics of the Pulikulam cattle rearers in Madurai and Sivagangai districts of Tamil Nadu. A sample size of 90 Pulikulam cattle rearers (45 rearers from each district) who were actively involved in Pulikulam cattle rearing were selected randomly for the study. A well-structured, pre-tested interview schedule was used for the primary data collection for this study. Findings indicated that majority (55.56 per cent) of the respondents was landless farmers and 42.22 per cent of the respondents belonged to old age category. Majority (40.00 per cent) of the respondents were educated up to primary level of education. Majority (82.22 per cent) of the respondents had Animal Husbandry as main occupation. Nearly one-fifth (56.67 per cent) of the respondents had high level (above 20 years) of experience in Pulikulam cattle rearing. One-half (51.11 per cent) of the respondents had medium level of contact with extension agency with 56.67 percent of the respondents had low level of mass media exposure. Majority (57.78 per cent) of the respondents had high level of economic motivation. Finding of the study revealed that subject to the availability of drinking water and grazing land Pulikulam cattle rearing with zero input and management may be advocated among farmers for better income.

Introduction

The livestock sector plays an important role in the socio-economic development of rural households in India. It contributes about three per cent to the nation's GDP and 30 per cent to the agricultural GDP (Anonymous, 2015). India has 40 registered indigenous cattle breeds. Tamil Nadu has only four registered indigenous cattle namely Bargur, Kangayam, Umblachery, Pulikulam. Among this breeds

Pulikulam cattle was reared as migratory herd with herd size of about 150-400 animals. Farmers are benefited through penning which provides rich organic manure for agricultural crops, (Vivekanandan and Alagumalai, 2013). The population of Pulikulam cattle was about 50,000, of which 20,000 were breeding females. These animals are distributed in more than 200 herds of about 50 villages of

Madurai, Virudhunagar and Sivagangai districts of Tamil Nadu (Kanakraj and Kathiresan, 2006). The number of herds per village varied from 1 to 24. The herd size of the Pulikulam cattle varied from 30 to 500 with an average of 225, which was reported to be decreasing during last 2–3 decades mainly due to shrinkage in grazing land (Singh *et al.,* 2012).

Materials and Methods

Madurai and Sivagangai districts were purposively selected for this study due to the presence of high Pulikulam cattle population in Tamil Nadu (Madurai and Sivagangai districts had fairly a good population of Pulikulam cattle (21,225) survey report on Pulikulam cattle, SEVA, 2012). Usilampatti and Thiruparankundram blocks were selected purposively from Madurai and similarly, Sivagangai and Manamadurai block of Sivagangai districts as it contains fairly a good population of Pulikulam cattle. Three villages *viz.,* U. Vadipatti, Idayapatti and Chettiyapatti in Usilampatti block (24 Pulikulam cattle rearers) were selected and three village *viz.,* Manapatti, Thenpalanji and Vadapalanji in Thiruparankundram block (21 Pulikulam cattle rearers) were selected. Similarly two villages *viz.,* Kilathiri and Kuranthaikulam in Sivagangai block (25 Pulikulam cattle rearers) and two villages *viz.,* Manangkathan and Valarenthal (20 Pulikulam cattle rearers) were selected.

These villages were selected based on proportionate stratified random sampling technique as they have considerable population of Pulikulam cattle. A well-structured pre-tested interview schedule was developed for collecting data from the respondents according to the objectives of the study. The primary data was collected from the respondents by conducting personal interview.

Results and Discussion

The result of the investigation carried out was presented through the Table 1 showing the socio-economic profile of Pulikulam cattle rearers.

Land holding

Table 1 indicates that above one-half (55.56 per cent) of the respondents were landless farmers and they reared their cattle in free-range community rearing system. This was followed by 37.78 per cent of the respondents were marginal farmers.

This might be due to the fact that rearers in the study area migrate throughout the year in surrounding districts for grazing the cattle. The results of the present land holding differ with the findings of Ghotge and Gaspardy (2016) who reported that the average land holding was 4.05 acres.

Age

Table 1 clearly depicts that 42.22 percent of the respondents belonged to old age at the time of enquiry. This was in agreement with Mali *et al.,* (2014) and Thombre *et al.,* (2015) who reported that most of the respondents belonged to old age category.

Community

Table 1 depicts that 84.44 percent of the respondents belonged to BC community followed by MBC community (14.00 per cent).

This might be due to fact that most of the BC community farmers rear Pulikulam cattle as their ancestral occupation. Most interesting fact in this finding was that none of the respondent belonged to OC, SC and ST categories.

Education

Table 1 indicates that one fourth of the respondents (40.00 per cent) educated up to primary level of education followed by 32.22 per cent were illiterate. This might be due to the fact that the respondents followed ancestor's occupation early in life due to their poor economic status.

Family type

It could be found from Table 1 that majority (87.78 per cent) of the respondents belonged to joint family whereas, 12.22 percent of the respondents belonged to nuclear family. This was mainly due to fact that most of respondents live in close community system where they follow their tradition and culture set by their ancestors

Herd size for Semi-intensive system of rearing the Pulikulam cattle

Table 1 reveals that there were cent percent of the respondents who reared their cattle by semi-intensive system of rearing has small herd size. This might be due to fact that most of the rearers reared their cattle for Jallikattu, ploughing and carting in small numbers for providing better training to the cattle.

Herd size for free range system of rearing Pulikulam cattle

Table 1 reveals that majority (78.08 per cent) of the respondents belonged to medium (100 – 200 numbers) herd size category, followed by 21.92 per cent of the respondents belonged to high (more than 200 numbers) herd size category.

Main occupation

A majority (82.22 per cent) of the respondents had Animal Husbandry as main occupation,

followed by agriculture (10.00 per cent), private job (6.67 per cent) and government job (1.11 per cent). This might be due to fact that rearing Pulikulam cattle would improve their livelihood. The results of the present occupational status differ with the findings of Kishore *et al.,* (2013) who reported that majority of respondents maintained agriculture as the main occupation.

Total annual income

It could be observed from the Table 1 that maximum proportion (76.67 per cent) of the total respondents had total annual income as eighty thousand to one lakh sixty five thousand. This is in agreement with the findings of Verma *et al.,* (2014) who reported that most of the respondents belonged to medium income category having an annual income between Rs. 80,000 – 1, 30,000.

Annual dairy income

Table 1 indicates that maximum proportion 94.44 per cent of the total respondents had eighty thousand to one lakh twenty thousand annual dairy income. This finding was not in consonance with result of Sathyanarayan *et al.,* (2010) who reported that most of the respondents were belonged to low income category.

Experience in dairy farming

As shown in the Table 1 nearly one fifth (56.67 per cent) of the respondents had high level (above 20 years) of experience in Pulikulam cattle rearing. This might be due to the fact that most of respondents were old age category and preferred rearing Pulikulam cattle early in life for their livelihood. This was in agreement with Kumar and Tripathi (2012) who reported that most of the respondents had 10- 25 years of experience in livestock farming.

Table.1 Socio-economic profile of Pulikulam cattle rearers

(N=90)

Variables	Category	Frequency	Percentage
Age	Young (< 35 years)	31	34.44
	Middle (36 – 45 years)	21	23.33
	Old (> 45 years)	38	42.22
Community	BC	76	84.44
	MBC	14	15.56
Education	Illiterate	29	32.22
	Primary	36	40.00
	Middle	20	22.22
	Secondary	2	02.22
	Higher secondary	3	03.33
Family type	Nuclear	11	12.22
	Joint	79	87.78
Annual total income	<80000	6	06.67
	80001 – 165000	16	17.78
	>165000	68	75.56
Land holding (in acres)	Landless	50	55.56
	Marginal (up to 2.5)	34	37.78
	Small (2.6 – 5.0)	6	06.67
	Large (above 5.00)	--	--
Herd size for semi intensive system of rearing farmers (N=17)	Small (up to 3 cattle)	17	100.00
	Medium (4 – 6 cattle)	--	--
	Large (above 6 cattle)	--	--
Herd size for free range system of rearing farmers (N=73)	Small (< 100)	--	--
	Medium(100 – 200)	57	78.08
	Large (> 200)	16	21.92
Farm experience	Low (up to 10 yrs)	5	05.56
	Medium (10-20yrs)	34	37.78
	High (Above 20yrs)	51	56.67
Contact with extension agency	Low	25	27.78
	Medium	46	51.11
	High	19	21.11
Social participation	Low	33	36.67
	Medium	33	36.67
	High	24	26.67
Mass media exposure	Low	51	56.67
	Medium	14	15.56
	High	25	27.78
Economic motivation	Low	--	--
	Medium	38	42.22
	High	52	57.78

Contact with extension agency

It could be seen from Table 1 that one half (51.11 per cent) of the respondents had medium level of contact with extension agency, followed by low (27.78 per cent) and high (21.11 per cent) level of contact with extension agency. Farmers were found to contact extension personnel for guidance and advice regarding getting subsidies and government schemes. This was in agreement with Ashwar *et al.,* (2011) and Sabale *et al.,* (2014) who reported that most of the respondents had medium level of extension agency contact.

Social participation

Table 1 indicates that equal percent (36.67 per cent) of respondents had medium and low level of social participation. This was in agreement with Subrahmanyeswari *et al.,* (2007) who reported that most of the respondents had medium level of social participation.

Mass media exposure

Table 1 reveals that 56.67 per cent of the respondents had low level of mass media exposure followed by high (27.78 per cent) and medium (15.56 per cent) level of mass media exposure. This might be due to fact that most of rearers stay away from residency along with herd in cultivable land. This was in agreement with Devaki *et al.,* (2015) who reported that most of the respondents had low level of mass media exposure.

Economic motivation

A majority (57.78 per cent) of the respondents had high level of economic motivation while 42.22 per cent belonged to medium level of economic motivation. This indicates that Pulikulam cattle rearers preferred more

production and to earn more income for higher living standard. This was in agreement with Gour (2002) and Mali *et al.,* (2014) who reported that most of the respondents had high level of economic motivation.

The profile characteristic like age, education, experience, herd size, occupation and extension agency contact help us to identify the socio-economic status. Keeping this as base they should be given capacity building and need based training programmes by government and non-government extension agencies. The finding of the study further implied that subject to the availability of drinking water and grazing land Pulikulam cattle rearing with zero input and management may be advocated among farmers for better income.

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