

*Original Research***Socio-Economic Status and Perceptions of Kosali Cattle Keepers and Constraints to Cattle Production in Central Plain Region of Chhattisgarh State**

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Abstract

The present study was conducted to find out the socio-economic status and constraints to cattle production in Central Plain Region of Chhattisgarh state. Total 800 respondents from three districts of the region were selected. Sex, age, family size, education, land and livestock holding, annual income, occupation and herd size factors were considered to study the socio-economic status. It was observed that majority (95.42%) of the respondents had male headed ownership, more than 50 per cent in above 30 years of age category. The average family size observed was 6.21 persons. It was found that only 66.56 per cent of respondents were literate. The percent of landless, sub-marginal and marginal farmers is more than 50% and have less than 0.5 hectare land. Most of the respondents (47%) found in the category of annual income less than rupees 20000. The main profession of livestock owners was agriculture (68.44%) followed by agriculture and some other small work. Most of the respondents had small herd size. Shrinkage of grazing land, scarcity of green fodder and concentrate and poor management were the major constraints to cattle or livestock productivity.

Key words: Cattle Keepers, Kosali, Plain Region, Socio Economic Status

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Introduction

Livestock play a vital role in the agricultural and rural economies of the developing world. Indian subcontinent has vast livestock genetic resources of which 40 well known breeds are of cattle. During the first quarter for Year 2016, agriculture and allied sectors grew 1.9 per cent year-on-year and contributed 14.2 per cent of Gross Value Added (Anonymous, 2016). In Chhattisgarh, livestock are raised as a part of mixed farming systems and are closely associated with socio-economic and cultural ethos of the farming community. According to 19th livestock census, this state has 9.81 million cattle heads (Anonymous, 2014) and contribution to the total livestock population is the highest (65%). The Kosali is the first breed of the cattle from the Chhattisgarh state and it has been registered as the 36th breed of cattle (Accession No. INDIA_CATTLE_2600_KOSALI_03036). In general, these animals are smaller in size with poor milk production potential but they have evolved as a result of very long period of natural selection and are well adapted to the existing agro-climatic conditions of the region. They have good capacity of heat tolerance and disease resistance and can thrive well under the poor feed stuffs available in the state. These animals serve as source of cash income and play significant role in the social and cultural values of the society.

Apart from the Government policies, the problems of livestock production in developing countries are becoming more critical as population increases, demand elasticity is growing and the production systems still remain constrained by socio-economic and biological factors. With primary focus on animal husbandry/veterinary services, acknowledged socio-cultural factors as an appendage of major concern in seeking solution to problems facing livestock production is necessary. The indigenous knowledge, socio-economic situation and attitudes of the rural farmers should be taken into consideration when planning strategies for rural livestock improvement. Socio-economic status of the farmers or livestock keepers plays an important role in agriculture and allied sector in India. Socio economic status of the farmers or livestock keepers are determined by several factors like below poverty line, education, family size, land holding of the farmers, loan requirements etc (Kar and Dhara, 2010, Rathod *et al.*, 2011). The socioeconomic, psychosocial, situational factors are the major causes of suicides of farmers in India (Kale *et al.*, 2014). There are a lot of researches being done on livestock keepers; however, their socio economic status has not been explored as much in research papers especially in Chhattisgarh perspective. Hence, in current survey, an attempt was made to study the socio-economic status of cattle keepers and constraints affecting cattle production systems in Central Plain Region of Chhattisgarh.

Materials and Methods

A stratified two stage random sample survey was carried out in breeding tract during September, 2014 to September, 2016 and three districts namely, Rajnandgoan, Baloda bazaar and Bilaspur were selected. At

least a total of 800 respondents were included in the study. Data were collected in-depth interviews, direct observation, group discussions and structured questionnaires. Based on the outcome of discussion and earlier studies, information was gathered on socio-economic factors like sex, family size, education, annual income, occupation, land holding, type of land and livestock holding were included in the study. While selecting respondents due care was taken to ensure that they were evenly distributed in the village and truly represented animal management practices prevailing in the area. The data collected from the field and secondary sources were entered in to database using Excel 2007 software and tabulated. The statistical tools like means, frequency and percentages were used for interpreting the data and inferences were drawn.

Result and Discussion

Communities Responsible for Developing and Rearing the Kosali Cattle

Most households, irrespective of their land holding, even landless, keep animals such as, cattle, buffalo, goat, pig and poultry in Chhattisgarh state. This is an important source of supplementary income and nutrition in the state. Livestock are raised as a part of mixed farming systems and are closely associated with socio-economic and cultural ethos of the farming community. The proportion of other backward classes (OBCs) population is very high (~ 45%) followed by schedule tribes (34%) and schedule caste (12 %) of the total population. Central plains are dominated by OBCs while other two zone (Northern Hilly and Southern regions) of CG state dominated by tribal population. Plain area is numerically dominated by Teli/patel, Satnami and Kurmi while forest area is mainly occupied by tribes such as Gond, Halbi, Halba and Kamar/Bujia and Oraon. These communities are rearing and developing the Kosali breed and other non descriptive breed of cattle. The farmers of other communities are also rearing few Kosali cattle mainly for their own need of milk/fuel/agricultural purposes.

Sex, Age and Family Size

Majority of the respondents (95.42%) were male, whereas, very small 4.58 per cent of the respondents were female. This might be due to the male headed family and more involvement of the male in cash crop and dairy. It was observed that majority of respondents (53.43%) belongs to age category of 31 to 45 age. Collected data revealed that people in the studied area like to live in joint as well as nuclear family. The average family size observed was 6.21 persons. Women (house wives) play a significant and dominant role in caring for the cattle. Women perform specially cleaning of the yard more frequently. However, the householder (husband) is mainly responsible for sale and purchase of animals.

Education

Education of the respondents is one of the important factor with respect to adoption of new innovations and technology. The literates are those who can read and write in mother tongue. The percentage of literacy from breeding tract was 66.56% of the total family members. The literacy rate was more in males than females.

Land and Livestock Holding

In Chhattisgarh, livestock are an important source of supplementary income and nutrition. Livestock are raised as a part of mixed farming systems and are closely associated with socio-economic and cultural ethos of the farming community. Livestock also constituents “living bank” providing flexible financial reserves in times of emergency and serve as “insurance” against crop failure for survival which is a frequent phenomenon in Chhattisgarh State. Human population of the state is 2.55 crores (Census, 2011). The rural population contributes 77% and urban 23% to the total population. About 78% of the total rural householders are farmers. Two third of the total farmers are from the Central Plains region, 20% from the Northern region and 12% from the Southern region. The percentage of landless, sub-marginal and marginal farmers is more than 50% and have less than 0.5 hectare land (Table 1).

Table 1: Distribution of land holdings and animal distribution in CG state

Category	% Household	Cattle	Buffalo	Small Ruminants	Rural Poultry	Pig
Landless (0.002 ha)	17.6	0.3	0.2	0.7	2.5	11.1
Sub-marginal (0.002-0.5 ha)	24	14.2	6.7	17.8	14.6	22.1
Marginal (0.5 ha)	19.5	19.5	15.7	24.3	50.8	24.7
Small (1-2 ha)	19.8	25	34.8	23.7	19.6	9.4
Semi medium (2-4 ha)	13.8	25.6	17.6	27.2	8.7	19.2
Medium (4-10 ha)	4.7	12.9	19.6	6.3	3.7	13.3
Large (> 10 ha)	0.5	2.4	5.4	---	---	---
Total	100	100	100	100	100	100

These constitute the rural poorest of poor. However, the distribution pattern of animals indicates that more than 40.0% of small ruminants and 60% of backyard poultry are reared by these sections together. More than 50% cattle and buffalo are reared by small and semi-medium type farmers (Table 1; reviewed by Pandey *et al.*, 2014). This indicates that any poverty alleviation program for rural area in agricultural sector should include animal husbandry as major component.

Occupation and Income

Agriculture and livestock rearing are two main sources of income in the studied area. With increasing awareness, farmers/livestock keepers are not only dependent to farming or cropping or livestock unit as

the only source of their income but they have also done agribusiness, private work and low income jobs, shopkeepers, labour and as a worker. The main profession of cattle owners was agriculture (68.44%) followed by agriculture and labour. The annual income of livestock owners under survey was below thirty thousand in 79 % cases, which indicates that the livestock owners are from poor family background and hardly 4.64% owners having income above fifty thousand per annum (Table 2).

Table 2: Socio-economic factors of Kosali cattle keepers/farmers

Factors	Category	Total
Occupation	Agriculturist	540 (68.44%)
	Labor	45 (5.7%)
	Both	178 (22.49%)
	Other	26 (3.14%)
Income (Rs)	Below 20,000	352 (46.74%)
	20,000-30,000	250 (32.7%)
	30,000-50,000	115 (15.40%)
	Above 50,000	35 (4.64%)

Herd Size

It belongs to the number of cattle possessed by the respondents. The analysis of data revealed that 60 % of the respondents were having small size herd followed by medium (33 %) and large size (7 per cent) herds. The average cattle herd size of sampled households was 5.2 heads with a range of 1 to 12 irrespective of sex. Generally, it was observed that each family keeps 2-5 females cows along with 1-2 calves/young stock. Only few livestock keepers/farmers are maintaining one male for breeding purpose. Generally, farmers loose their males in own village and these males are used for mating purposes especially at the time of grazing. An animal attendant, commonly called as *Charwaha/Rauth*, take care of herd of animals of the entire village which was consisted 90-160 adult female, 8-15 males, 45-70 young ones and 30-40 calves.

Crop Production

Paddy contributes 89% of crop residues whereas contribution of wheat, maize, pulses and other are 1%, 3%, 6% and 1%, respectively. The present status of pasture lands is deteriorating rapidly due to so many reasons but over grazing is one of them. The area used as grazing land is about 3 to 4 % of the total land area.

Feed and Concentrates to Cattle and other Livestock Species

Animals are offered mostly dry fodder which consists generally un-chaffed paddy straw (93%). Sometime chaffed dry fodder and concentrate are provided in soaked form to the animals. The green fodder is rarely

grown and naturally grown grasses are available during rainy season only and provided to the animals. The animals are fed in groups and individually. The concentrate feed, which comprises of broken rice and rice polish (Kodha) may sometimes be supplemented to the lactating cows (at the time of milking) and working bullocks. There were no practice of feeding concentrates to young ones, heifers and even pregnant animals.

Constraints of Kosali Cattle Production

1. Shrinkage of grazing land due to human population growth, encroachment of cropping land and disease prevalence are reported frequently.
2. Scarcity of the green grasses and concentration feeds are the main hurdle in improving the reproductive and productive performances.
3. Poor management of the already existing communal grazing land, bush encroachment and the problem of invaders and increasers, improper management of watering points and poor husbandry and breeding practices are also among noted constraints to Kosali cattle production.
4. The rugged topography in some area, seasonal scarcity of water, unusual protraction of dry seasons and the prevalence of marshy and swampy areas in some places and the associated incidence of internal parasite infestation also affect cattle production.
5. Veterinary and extension services are not also strong and evenly distributed.
6. Socioeconomic problems viz shortage of capital to invest on livestock breeding activity, labor scarcity (for herding), predator attack and cattle raiding are common problems in the area.

Conclusion

The present study concluded that women and men both were involved in animal husbandry practices and animal husbandry was an integral part of their living being. Nuclear and joint family were prevalent and majority of Kosali cattle keepers had male headed ownership. The percent of landless, sub-marginal and marginal farmers are found more. The main profession of livestock owners was agriculture and some other small work. Most of the respondents found in the category of annual income less than rupees 20000. Most of the respondents had small herd size. Kosali cattle keepers from the breeding tract were found poor and illiterate and hence they were neither aware of modern technologies nor ready to adopt modern management practices. It can be improved through education, teaching aids, organize training programmes, demonstrations, kisan ghosthi and exposure visits by various government organizations and NGOs.

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