



Research Article

SOCIO-ECONOMIC STATUS OF RED KANDHARI CATTLE REARING FARMERS IN KANDHAR BLOCK OF NANDED DISTRICT IN MAHARASHTRA

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Received: June 28, 2019; Revised: July 11, 2019; Accepted: July 12, 2019; Published: July 15, 2019

Abstract: The study was conducted to evaluate the socio-economic status of Red Kandhari cattle rearing farmers during the year 2015-16 in Kandhar block of Nanded district in Maharashtra. Data on family background, land holding, animal management practices were collected from the farmers through interview and specially designed questionnaire. The majority of livestock farmers (64.56 percent) lived in nuclear family; small family size (64.56 percent) and 79.64 percent farmers were literate. Majority of Red Kandhari animals (61.61 percent) were owned by farmers having small family size. Animal husbandry was the main source of livelihood. Livestock farming was the main source of livelihood of majority of the farmers (88.07 percent) had small land holding below 5 acres, 53.14 percent farmers had medium herd size (6-10 animals). The animal breeding was undertaken by Natural service (66.31 percent). The animal housing was low cost kaccha type (85.32 percent). The 79.72 percent farmers grazed their animals and remaining animals were stallfed, 72.02 percent farmers followed deworming and 83.21 percent vaccinated animals. About 48.95 percent farmers were rearing Red Kandhari animals for milk and draught purpose. All farmers followed clean milk production practices.

Keywords: *Animal management practices, Dairy farmers, Red kandhari, Socio economic status*

Citation: Kauthale V.K., *et al.*, (2019) Socio-economic Status of Red Kandhari Cattle Rearing Farmers in Kandhar Block of Nanded District in Maharashtra. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 11, Issue 13, pp.- 8744-8746.

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Academic Editor / Reviewer: Dr G Thiagarajan

Introduction

Livestock sector contributes about 25.6 percent to the agricultural GDP and 4.11 percent to national GDP of India. Animal husbandry sector plays pivotal role in national economy. It directly or indirectly provides employment to about 20.5 million people. Livelihood of as much as 70 percent of rural population depends on livestock and providing employment to 8.8 percent population [1]. It has been observed that around 16 percent of small and marginal households earn their income from livestock. There are 43 recognized breeds of cattle and 15 breeds of buffalo. Out of these five cattle breeds are recognized as dairy breeds, 12 are dual and 26 are draught purpose breeds. Red Kandhari is a draught purpose breed found in the breeding tract of Nanded Parbhani, Latur, Hingoli and Beed districts of Maharashtra. These animals are hardy in nature and well adapted to dry and semi-arid climate. During summer the district experiences extreme heat with the mercury touching 44°C while in the winter the temperature drops to 9°C. The average rainfall in the district is 1150 mm [2]. The Red Kandhari bullocks are widely used for draught purpose such as ploughing and transportation. Animals of the Red Kandhari breed are generally maintained under extensive management system on grazing in small herds. Usually small amount of concentrate offered to bullocks, milking cows and male calves.

Material and methods

The household survey was carried out during the year 2015-16 in 7 villages of Kandhar Block of Nanded district of Maharashtra state. An exploratory research design was used to collect the data from 285 respondents which were selected by random sampling method. The information was collected on family size, literacy, land holding, animal herd size, animal husbandry practices followed, etc. The data was tabulated and analyzed by using standard statistical methods.

Results and Discussions

Socio-economic characteristics of farmers rearing Red Kandhari cattle Family type The dairy farmers were grouped in two category i.e. nuclear and joint family. The data revealed that majority (64.56 percent) of the dairy farmers having nuclear type families and owned 61.61 percent Red Kandhari cattle and rest of the farmers (34.44 percent) were living in joint families [Table-1]. This may be due to influence of modern education and inclination towards seeking non-agriculture employment opportunities. This finding derives support from the findings of Satyanarayan and Jagadeeswary [3] and Sathyanarayan *et al.* [4].

Family size

Around 64.56 percent households were having small family size with 1-5 members followed by large family size (20.00 percent) and medium (15.43 percent). The farmers expressed that because of industrialization, family size was reduced. These findings are in accordance with the finding of Satyanarayan and Jagadeeswary [3].

Land holding Pattern

The Red Kandhari cattle owners were grouped according to land holding in four category i.e. landless, small (< 5 acres), medium (6-10 acres) and large (> 10 acres). It was observed that most of the farmers (60.13 percent) had small land holding followed by medium (25.87 percent) and large (11.18 percent) remaining 2.47 percent of farmers were landless. Similar results were observed by Ananthnag *et al.*, [5] and Prajapati *et al.* [6].

Farmer Occupation

It was found that 88.07 percent of the farmers have livestock farming as their main source of livelihood and 11.92 percent farmers had other source livelihood like agricultural labour work. Reddy [7] have reported similar findings.

Table-1 Distribution of respondents according to their socio-personal characteristics

S	Parameters	Category	Frequency (N=285)	No. of Red Kandhari cattle (N=2389)
1	Family type	Nuclear	184(64.56)	1472 (61.61)
		Joint family	101(35.44)	917(38.38)
	Family size	Small (1-5)	184(64.56)	1472 (61.61)
		Medium (6-8)	44(15.43)	350 (14.65)
		Large (>8)	57(20.00)	567(23.73)
2	Landholding	Small (<5acres)	172(60.13)	1172(49.05)
		Medium (6-10acres)	74(25.87)	721(30.17)
		Large >10 acres)	32(11.18)	458(19.17)
		Landless	7(2.47)	38(1.50)
3	Occupation	Livestock Farming	251(88.07)	1899 (79.48)
		Labor work	34(11.92)	490 (20.50)
4	Literacy	Literate	227(79.64)	1991 (83.34)
		Illiterate	58(20.35)	398 (16.66)

(Figures in the parenthesis indicates percentage)

Table-2 Distribution of farmers according to housing types and practices adopted for rearing Red Kandhari cattle

S	Parameters	Category	Frequency	Percentage
1	Herd Size	Small (1-5 animals)	65	22.72
		Medium (6-10 animals)	152	53.14
		Large (>10 animals)	69	24.12
2	Breeding Pattern	Artificial Insemination	46	16.08
		Natural Service	189	66.31
		Both	51	17.83
3	Animal Keeping Time In Shed	Day	58	20.28
		Night	228	79.72
	Roof of shed	Pucca	42	14.68
		Kachha	244	85.32
	Floor of shed	Pucca	10	3.49
		Kachha	276	96.5
	Location of animal shed	Inside house	262	91.6
4	Animal utility	Outside house	24	8.39
		Milk	113	39.51
		Milk and draught	140	48.95
5	Feeding pattern	Breeding purpose	33	11.53
		Grazing	228	79.72
		Stall feeding	58	20.28
6	Deworming	Yes	206	72.02
		No	80	27.97
7	Vaccination FMD HS BQ	Yes	238	83.21
		No	48	16.78
8	Clean utensils/ cow udder	Yes	286	100

Literacy

Education of the respondents was one of the important parameters with respect to adoption of new innovations. The data given in [Table-1], indicated that 79.64 percent respondents were literate and 20.35 percent were illiterate. These findings were in conformity with the findings of Rathod [8].

Herd size

The respondents were classified according to the size of Red Kandhari cattle owned by them as shown in [Table-2]. It was observed that 22.72 percent respondents were having small herd size, 53.14 percent had medium herd size and 24.12 percent had large herd size. This observation matches with the findings of Mande and Thombre [9].

Animal Breeding

Most of the livestock farmers (66.31 percent) have adopted natural service for breeding their animals while only 16.08 percent farmers used artificial insemination for conception and around 17.83 percent livestock farmers followed both type of breeding method. This may be due to lack of artificial insemination facility in the study area and traditional wisdom of the farmers.

Animal Housing

Proper animal housing is an important factor in management and it helps to encourage the scientific feeding, proper disease control, better care and management along with prevention of animal from adverse climatic conditions leading to improvement in productivity. Majority of the livestock farmers (79.72

percent) tied animals only in the night hours and took them for grazing during day time, while remaining (20.28 percent) tied their animal in shed during day time with stall feeding [Table-2]. Tudu and Roy [10] observed that 62.80 percent farmers kept their animals confined during night only. Maximum number of the dairy farmers (85.32 percent) had kaccha roof animal house while 14.68 percent had Pucca roof [Table-2]. The 96.50 percent dairy farmers were found to be had kaccha flooring while only 3.49 percent had Pucca floor in the animal house. These findings are in close conformity with the earlier reports of Kumar *et al.* [11], Aggarwal and Sharma [12] reported 26 percent Pucca floors and Mahila [13] reported 6.87 percent kaccha floor for Kankerej cattle. It was also observed that majority of the livestock farmers (91.60 percent) kept their animals inside dwelling house, followed by 8.39 percent livestock farmers who kept outside the dwelling house. Mahila [13] reported that 86 percent and 66.25 percent farmers provided separate stall inside and outside the human dwelling respectively.

Utility of animals

Data indicated that majority of the livestock farmers 48.95 percent rear animal for both milk and draught purpose followed by 39.51 percent only for milking purpose, 11.53 percent for breeding purpose.

Feeding type

It was found that open grazing (79.72 percent) was preferred than only stall feeding (20.28 percent). After grazing the animals were stall fed with little concentrate feeding to productive animals. Sabapara *et al.*, [14] reported that stall feeding is practiced by 15.33 percent and open grazing by 84.67 percent farmers.

Deworming and vaccination

It has been observed that 72.02 percent of the respondents were regularly following deworming of animal and 83.21 percent farmer has vaccinated animals against FMD, HS and BQ vaccine which are provided at normal price to farmer by government. Many farmers had frequent consultation with veterinary doctors for treatment of their animals.

Clean milking

All livestock farmers (100 percent) pointed out that they clean the milking utensils and udder before milking.

Conclusion

It could be concluded that majority of farmers rearing Red Kandhari cattle for milk and draught purpose. Majority of them had small land holding and medium herd size and follow the natural breeding service. The animals are kept in kaccha type housing and practice animal grazing. It was also found that most of the farmers adopted clean milking practices and regular deworming and vaccination of animal. There is scope for improvement in breeding and feeding to get more economic gain from animals.

Application of research

The research findings may be useful to veterinary professionals, policy makers in finalizing the animal development program for this breed. This research will also be useful to the researchers engaged in Animal husbandry and dairy for chalking out their field studies.

Research Category: Animal husbandry and dairy

Abbreviations: FMD- Foot and Mouth Disease, HS – Hemorrhagic Septicemia
BQ – Black Quarter, GDP – Gross Domestic Product

Acknowledgement / Funding: The authors are thankful to Rajiv Gandhi Science & Technology Commission, Government of Maharashtra for financial support, Dr. A. B. Pande for his encouragement and suggestions in this study and Mr. N. L. Phadke for statistical data analysis. Author are also thankful to BAIF Development Research Foundation, Pune 411058, India

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Institute: BAIF Development Research Foundation, Pune 411058, India
Research project name or number: Maharashtra Gene Bank Project for conservation management and revival of local bio-resources.

Author Contributions: Shivaji Chirfare was involved in field survey, data collection and tabulation, Vitthal Kauthale and Jayant Khadse contributed in data analysis, interpretation of results and writing the manuscripts.

Author statement: All authors read, reviewed, agreed and approved the final manuscript. Note-All authors agreed that- Written informed consent was obtained from all participants prior to publish / enrolment

Study area / Sample Collection: Kandhar Block of Nanded district of Maharashtra state

Breed name: Red Kandhari

Conflict of Interest: None declared

Ethical approval: This article does not contain any studies with human participants or animals performed by any of the authors.
Ethical Committee Approval Number: Nil

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