

NATURE, QUALITY AND PRODUCTIVITY OF NOMADIC GUJJARS' LIVESTOCK -A CASE STUDY OF J&K AND H.P.

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ABSTRACT

After India's Independence, the occupational avenues have undergone a tremendous change. With the spread of education and other amenities of life the traditional occupational structure has considerably changed. The Gujjars who have been a nomadic tribe, animal rearing is still practiced by them. But their cattle are considered to be of poor quality, uneconomical and a burden on land. In order to assess Gujjars animal husbandry activity, we have enumerated the number and quality of the nomadic Gujjars livestock, the productivity of their animals, causes responsible for the low productivity and efficiency of livestock and suggested some measures to improve the productivity and efficiency of livestock. For this we have used secondary as well as primary data. For secondary data, books, reports, journals, web sites etc we have explored. For primary data, a comprehensive survey of 200 households of nomadic Gujjars was conducted in Udhampur and Kangra district of J&K and Himachal Pradesh respectively. In this paper we have found that gujjars are rearing local breed and possessing surplus animals. There is acute shortage of fodder especially green nutritious fodder, which is the major cause of low productivity of the livestock. The available fodder is not only insufficient but also poor in nutritive value; as a result, the productivity of the animals is very low. And due to this bovine economy is almost uneconomical for them. In this paper it is suggested -adequate supply of feed and fodder, adequate animals' health facilities, improved genetic or breeding system, marketing facilities etc.

KEYWORDS:

INTRODUCTION

Livestock sector plays a critical role in the welfare of India's rural population. Contrary to many developed countries, where less than 3 per cent of the population is engaged in agriculture and animal husbandry, nearly 70 per cent of the population in India is dependent on agriculture (mainly crop production and livestock rearing)(17th **Livestock Census, 2003**). After India's Independence, the occupational avenues have undergone a tremendous change. With the spread of education and other amenities of life the traditional occupational structure has considerably changed. The Gujjars who have been a nomadic tribe, animal rearing is still practiced by them. Though, few of them become sedentary and own cultivable lands but still possess a few buffaloes and other animals. Their economy is revolving around their animals and they are mainly dependent on animal husbandry activity (**Koundal, 2012**). Generally, the

Indian cattle are considered to be of poor quality, uneconomical and a burden on land (**Chaktavarti, 1984**). In order to assess Gujjars animal husbandry activity, this study has been conducted with the following objectives.

Objectives

1. To enumerate the number and quality of the nomadic Gujjars livestock.
2. To evaluate the productivity of their animals.
3. To find out the causes responsible for the low productivity and efficiency of Nomadic Gujjars livestock.
4. To suggest measure to improve the productivity and efficiency of livestock.

Hypothesis

The pure bovine economy of the Gujjars is uneconomical for them because of large numbers and poor quality of their livestock.

Research Methodology

For this study, researcher has conducted a survey using stratified sampling technique in Udhampur and Kangra districts of J&K and Himachal Pradesh respectively. From these two districts, 200 nomadic Gujjars households (100 from each district) selected. Similarly, secondary data and information are also collected from different published and unpublished sources.

Findings

Table-1, Livestock possessed by the nomadic Gujjars in the study area

Livestock Possessed by Gujjars									
Name of Animal	Udhampur			Kangra			Combined		
	Local	Hy. Breed	Total	Local	Hy.Breed	Total	Local	Hy.Breed	Total
she Buffalo	1063	2	1065	519	0	519	1582	2	1584
He Buffalo	74	0	74	30	0	25	99	0	99
Cow	48	0	48	20	0	20	68	0	68
bullock	2	0	2	58	0	58	60	0	60
She Goat	17	0	17	6	0	6	23	0	23
He Goat	0	0	0	0	0	0	0	0	0
calf	236	0	236	150	0	150	386	0	386
stallion	27	0	27	3	0	3	30	0	30
mare	10	0	10	5	0	5	15	0	15
eve	43	0	43	20	0	20	63	0	63
ram	3	0	3	10	0	10	13	0	13
hen	90	0	90	75	0	75	165		165

Source: Survey Data

The table shows the number of livestock which is reared by the nomadic Gujjars in the study area. It is clear from the table that these nomadic Gujjars are possessing maximum number of

buffaloes (1584) as compared to other animals. Out of the total of 1584 she buffaloes in the area, 1065 were in Udhampur district and 519 were in Kangra district.

Table-2, Average number of she buffaloes per household

No. of Buffaloes	Udhampur			Kangra			Combined		
	HHs	Total Buffalo	Average Buffalo	HHs	Total Buffalo	Average Buffalo	HHs	Total Buffalo	Average Buffalo
Nil	-	-	-	-	-	-	-	-	-
Less than 5	40	97	2.43	48	132	2.75	88	229	2.60
5-10	27	163	6.04	43	279	6.49	70	442	6.31
10-15	18	270	15	9	108	12	27	378	14
More than 15	15	535	35.67	-	-	-	15	535	35.67
Total	100	1065	10.65	100	519	5.19	200	1584	7.92

Source: Survey Data

This table shows the average number of animals per household in both districts of the study area. In this regard those households who are possessing more than 15 buffaloes have the largest number of animals per household (35.67). The smallest number of buffaloes per household is kept by the less than 5 buffalo's possessor (2.60). The second and third positions are held by 10-15 and 5-10 buffalo's holders with 14 and 6.31 respectively. It means each household is keeping 7.92 buffaloes.

Table-3, Size of land and Livestock holdings

Size of land holding (in Kanal)	Udhampur		Kangra		Combined		Number of Livestock holding		
	No. of HHs	Size of land holding (K)	No. of HHs	Size of land holding (K)	No. of HHs	Size of land holding (K)	cattle	Buffaloes	others
Land less	68	0	22	0	90	0	20 (29.40)	1145 (72.29)	183 (21.23)
0-2K	7	15	4	4	11	19	10 (14.60)	79 (4.99)	19 (2.20)
2-4K	5	24	28	56	33	80	15 (22.10)	165 (10.42)	61 (7.08)
4-6K	4	31	15	46.5	19	77.5	8 (11.80)	76 (4.80)	150 (17.40)
Above 6K	16	202	31	221	47	423	15 (22.10)	119 (7.50)	449 (52.09)
Total	100	272	100	327.5	200	599.5	68 (100)	1584 (100)	862 (100)

Note: Figures within bracket indicate the percentage

Source: Survey Data

It is found that landless and marginal/small land holding Gujjars are possessing maximum livestock in the study area. It have been noticed in this table that 72 percent of the study areas' buffaloes is owned by landless nomadic Gujjars. In both the district this trend is noticed. This implies that land less and small landholders derive a considerable proportion of their income from livestock.

Table-4, Percentage of milch and dry animal to total animals

No. of Milch and Dry Buffaloes	Udhampur			Kangra			Combined		
	Milch	Dry	Total Buffalo	Milch	Dry	Total Buffalo	milch	Dry	Total Buffalo
Nil	-	-	-	-	-	-	-	-	-
Less than 5	64 (65.98)	33 (34.02)	97 (100)	85 (64.39)	47 (35.61)	132 (100)	149 (65.07)	80 (34.93)	229 (100)
5-10	109 (66.88)	54 (33.12)	163 (100)	168 (60.22)	111 (39.78)	279 (100)	277 (62.67)	165 (37.33)	442 (100)
10-15	146 (54.07)	124 (45.93)	270 (100)	60 (55.56)	48 (44.44)	108 (100)	206 (54.50)	172 (45.50)	378 (100)
More than 15	360 (67.29)	175 (32.71)	535 (100)	-	-	-	360 (67.29)	175 (32.71)	535 (100)
Total	679 (63.76)	386 (36.24)	1065 (100)	313 (60.31)	206 (39.69)	519 (100)	992 (62.63)	592 (37.37)	1584 (100)

Source: Survey Data

The percentage of milch and dry animals to total animals in area under study is shown in the table. Those who are possessing more than 15 she buffaloes occupy the highest position in case of milch animals with 67.29 percent followed by less than 5 she buffaloes with 65.07 percent, 5-10 with 62.67 percent and 10-15 with 54.50 percent respectively. On the whole, the ratio of milch animals to the dry animals in the study area is 62.63:37.37 or 3:2. It means that the milch animals outnumber the dry animals in the field area of study.

Table-5, Contribution of different categories of households in Udhampur and Kangra districts to milk production per day (in kgs)

No. of Buffaloes	Udhampur		Kangra		Combined	
	No of Milch Buffaloes	Milk Production Per day	No of Milch Buffaloes	Milk Production Per day	No of Milch Buffaloes	Milk Production Per day
Less than 5	64	245.76 (9.43)	85	372.3 (27.16)	149	618.06 (15.53)
5-10	109	418.56 (16.05)	168	735.84 (53.67)	277	1154.4 (29.02)
10-15	146	560.64 (21.50)	60	262.8 (19.17)	206	823.44 (20.70)
More then 15	360	1382.4 (53.02)	-	-	360	1382.4 (34.75)
Total	679	2607.36 (100)	313	1370.94 (100)	992	3978.3 (100)

Source: Survey Data

The contribution of Udhampur and Kangra districts households to daily milk production of the sample households is shown in the table. In Udhampur district, per day milk production of the 679 milch buffaloes are 2607.36 kg whereas in Kangra, it is 1370.4 kg of 313 milch buffaloes. With the help of this information, we have calculated the average yield of a buffalo in a year. It is 3.84 kg and 4.38 kg milk in Udhampur and Kangra respectively.

Table-6, Production of milch Buffalo

District	Age at 1 st calving (months)	Lactation length (Days)	Dry Period (Days)	Inter calving Period (Days)	Average milk yield/day (liters)
Udhampur	50	352	252	604	3.84
Kangra	50	340	240	580	4.38
Overall	50	346	246	592	4.11

Source: Survey Data

In this table an attempt has been made to calculate the economics of milk production of local buffalo in both districts of study area. The first calving period is same in Kangra and Udhampur district whereas lactation length, dry period and inter-calving period is much lower in Kangra than the Udhampur district. It has been noticed that the average yield per buffalo is highest in Kangra district (4.38 Kg). In Udhampur it is only 3.84 kg.

Table-7, Cost of maintenance of Buffalo (Rs. per lactation)

Item of cost	Udhampur	Kangra	Overall
Feed & Fodder	2124.90	1624.95	1874.93
Medicines etc.	70.00	60.00	65.00
Family labour	1462.00	1290.00	1376.00
Depreciation of animal	1500.00	1500.00	1500.00
Depreciation of animal shed	240.00	210.00	225.00
Concentrates	5475.00	4380.00	4927.50
Misc. cost	110.00	150.00	130.00
Total Cost	10981.90	9214.95	10098.43

Source: Survey Data

The total cost of milk production is more in Udhampur district than Kangra. It is estimated that the cost of maintenance of a buffalo per lactation in Kangra district is Rs. 10981.90 whereas in Udhampur district it is Rs. 9214.95.

The expenditure incurred on feed and fodder as well as on concentrate is highest in Udhampur district (Rs. 2124.90 and Rs. 5475 respectively). Fodder mainly consisted of green grass (purchased for feeding green and for making hay) and tree leaves (imputed value of labor for bringing the leaves from the fields and markets is considered for this purpose).

Labor is utilized for looking after the animals, feeding, grazing, cleaning of animal shed and milking of animals. It is found during survey that the maximum labour cost (Rs. 1462) is incurred in dairying activities by the nomadic Gujjars of Udhampur district while in Kangra cost of labour was Rs.1290. it is because wage rate in Himachal Pradesh is lower than to J&K.

Table-8, Economics of milk production per lactation

Particulars	Udhampur	Kangra	Av. Overall
Yield (liter)	1351.68	1489.2	1420.44
Value (Rs.)	21626.88	23827.2	22727.04
Value of Manure (Rs.)	150	120	135
Gross income (Rs.)	21776.88	23947.2	22862.04
Net Income (Rs.)	10794.98	14732.25	12763.61
Input-Output Ratio	1:0.98	1:1.60	1:1.26

Source: Survey Data

The efficiency of any business like dairy depends on such combination of resources that are most economical. The profitability of dairying activity of Gujjars depends primarily on the productive traits of the breed maintained. The productivity means the ratio of output to input. In both the district they are breeding local buffaloes. The average lactation yield per buffalo is 1351.68 liters (352x3.84) during the lactation period in Udhampur and that in Kangra is 1489.2 liters (340x4.38). So it reveals that the average milk yield per buffalo is lower in both districts as compare to national level. Net income from buffalo is highest for kanga district. When we compare its productivity through input-output analysis, again it has been found that Kangra is more productive but both are much far from national level. Overall the input-output ratio was 1:1.26 but in Udhampur (1:0.98) and in Kangra (1:1.60). So it is clear that Udhampur as well as Kangra districts are less productive. So it is proves that their pure bovine economy is uneconomical for them.

Reasons for low productivity of livestock

1. **Shortage & poor quality of feed and fodder resources-** The primary reason for the low productivity of livestock in both the district (Udhampur and Kangra) is inadequate availability of feed and fodder. It has been noticed that the quantity and quality of the feed and fodder is very poor in the area because large scale disappearance of grazing lands, pastures and forests. The loss in productivity of grazing land is due to heavy grazing.
2. **Quantity and Quality of feed and fodder resources-** The available fodder is not only insufficient but also poor in nutritive value. The natural resources of the Himalaya have been exploited for centuries in an unplanned manner leading to degradation all along. Consequently the livestock productivity is very low
3. **Surplus number of livestock-** As mention above on the table, there is a large number of animals in the study area. If there are more cattle than required, or useless cattle, and/or more than that can usually be supported by land, these may be assessed as surplus.
5. **Inadequate veterinary service-** The inadequate health coverage is also one of the reasons for low productivity in the region. The most of the doctors are available either in the main towns and cities in the states. Therefore, due to the poor transport and communication and uneasy approach to these centers, the Gujjars living in these hilly areas are unable to make use of these services.
6. **Defective marketing system-** Another cause of low productivity of livestock was the lack of proper marketing facilities. Being nomadic Gujjars are unorganized; as a result of this they are being exploited by the middlemen. In the study it was found that the marketing of

Gujjars products was controlled by middlemen or shopkeepers who took away a lion's share of the profit leaving very little incentive for improved production.

7. **Poor breed-** Another important cause of low productivity and efficiency of livestock in the study area was poor genetic and breeding system. In the study it was found that out of 1584 she buffaloes only 2 were of improved breeds and rest of them were indigenous and hence were of inferior quality. This indicated that almost whole of the buffaloes in the study area belonged to indigenous breeds and hence the productivity and efficiency was low.

Suggestions and Conclusion

In view of this, it is necessary that concrete steps should be taken in these states (J&K and Himachal) for improving the quality of livestock so that we can make Gujjars bovine economy economical. For this, a comprehensive policy for improving productivity and efficiency of livestock needs to be formulated for the entire area of the Jammu and Kashmir and Himachal Pradesh where emphasis should be laid on:

1. Adequate supply of feed and fodder

To improve the situation of feed and fodder in Udhampur and Kangra, the following measures should be taken:

- a) Improvement of pastures and other grazing lands
- b) Cultivation of high quality fodder crops

2. Adequate animals' health facilities

- a) The number of veterinary units should be increased in the far-flung areas of the state.
- b) Efforts should be made to train the staff and more veterinary colleges should be opened.
- c) Opening of mobile veterinary facility for nomads.
- d) Lastly, emphasis should be placed on preventive rather than curative measures.

4. **Improved genetic or breeding system:** For the purpose of upgrading the local live-stock strong efforts should be made for starting the Breeding Farms, Artificial Insemination Centres, Key Village Centres and Hill Cattle Development Centres.

5. **Marketing facilities:** The marketing facilities are expanded and made available in the far - flung areas and producers' cooperatives on the line of "Anand Dairy" are formed and the middlemen eliminated, the nomadic Gujjars would get the incentive to raise productivity and efficiency of live-stock considerably.

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