



Socio-economic evaluation of the herders practicing agro-grazing in district Bahawalpur, Pakistan

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SUMMARY

The herders/respondents involve in agro-grazing were 95% were landless having their own herders and 91% illiterate. Average size of the family was 8 and average annual income from animals of the livestock was 54830.0 PKR. Agro-grazing was their major occupation and they graze their animals mainly on farmlands and on natural vegetation growing along railway-line, canal side and road side. They grazed their livestock average 8.5 hours daily. Lack of nutritious forage and non-cooperative attitude of local farmers and Forest/Irrigation Departments were the major grazing problems of all the herders. The agro-grazing in the district can be promoted if the problems of the herders are solved. The herders demanded and average amount of the rupees (61525 PKR) as long for mainly for the purchase of livestock. Bahawalpur district has an area of 1632670 Acres excluding Cholistan in 2006-2007 and 2007-2008. Area under Kharif and Rabi fodder crops were 68800 and 40300 Acres respectively. Bahawalpur district has variety of land which is best suited for Agriculture and farmers hardly keep good land as follow / blank. Only the low potential land of the district is made available for livestock grazing. Keeping in view the importance of agro-grazing, the study was conducted in district with the objective to evaluate the socio-economic conditions of local herders, practicing agro-grazing at different locations and also to sort out the problems faced during the practice.

Keywords: Forest, Grazing, Herder, Socioeconomics, Bahawalpur

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INTRODUCTION

Livestock plays an important role in country's economy and contributed about 11.4% to GDP. The share of livestock in agriculture is 49.1 % (Khalifa, 2004). The role of livestock in rural economy may be realized from the fact that 30-40 % of income. Livestock resources in the country are increasing at the rate of 2-3% annually but nothing is being done to encourage sheep and goat farming on a progressive and scientific basis (Samdani, 2004). Nutritional requirements of these animals are mainly met through fodder crops, shrubs, grasses, fodder trees, crop residues and agro-

industrial wastes. Agro-grazing refers to grazing of livestock on cultivated lands. It has been estimated that 17 million animal units depend on agro-grazing (Saeed, 2004). Technical observe of farming ecology validates keeping of little number of grazing livestock in the farmlands (Quraishi, 1998).

With the introduction of more intensive in the cultivated areas of Pakistan, the practice of agro-grazing is gradually declining with time. However, some people still depend on agro-grazing as their major source of income. For feeding their herds depend on grazing in the agricultural fields after crop harvest, grasses, shrubs and branches of the trees. In addition to grazing on farmlands, their animals depend on the vegetation along railway-lines, roads, canals, rivers etc. currently these herders are facing multiple problems and need support to enhance their livestock production and consequently improve their socio-economic conditions. Faisalabad district has an area of 1443703 acres, out of which 1179648 acres is cultivated while the remaining area is un-cultivated, culture-able wasteland and not available for cultivation. Area under Kharif and Rabi fodder crops were 227500 & 157321 acres respectively. Faisalabad district has variety of land, which is best suited for agriculture, and the farmers hardly keep good land as fallows. Only the low potential lands of the district are made available for livestock grazing. Keeping in view the significant of agro-grazing, the study was conducted in the district with the objective to evaluate the socio-economic status of local herders practicing agro-grazing at different locations.

MATERIAL AND METHODS

The study was conducted in the Bahawalpur district of Punjab province 2006-2007. The relevant information regarding land utilization, livestock and soil were collected from the respective provincial department of the district and interview schedule was prepared to collect the required information from the herders. Herders, which mostly depends on grazing livestock as their major source of income. An interview schedule was pre-tested prior to conducting the actual survey and 132 herders were interviewed from 66 randomly selected villages according to following pattern.

RESULTS AND DISCUSSION

FAMILY SIZE, ILLITERACY LEVEL, LAND OWNERSHIP AND MAJOR OCCUPATION

Average family size of all the categories of herders was 8 and 91% of the respondents were illiterate. 95% of the respondents were landless and rearing of livestock is major source of income and agro-grazing is major occupation. The illiteracy in the herders might be due to poor socio-economic condition of the respondents that might be forced them to involve in agro-grazing (Table 1). Same types of findings were reported by Naseem, 1991 in district Multan and et al. 2004 in district Gujranwala and district Rajanpur respectively.

HERD OWNERSHIP AND INCOME FROM LIVESTOCK

100% of the herders had their own herds. Average no. of livestock of herders in various categories varied between 24–61 animals. The herders spend 8-9.4 hours daily grazing their livestock at various grazing places of the district by traveling average 7.76 km for grazing purpose. Average annual addition in their herd size was

about 18.4 animals and this addition is only through birth of animals and all the categories faced death of about 2.6 animals annually this may be due to poor veterinary facilities at local level. The herders of each category soled four animals annually in order to meet their domestic requirements. The average annual income from 54830 which varied between 30800 to 77812 PKR (Table 2).

Table 1: Herders profile and grazing information.

Categories	River side	Sub-urban side	Interior side	Railway/Road side	Canal side	Average
Family size	9	8	8	7	8	8
Education	Illiterate 83.33	91.66	100	86.66	91.66	91
	literate 16.66	8.33	0	13.33	8.33	9
Livestock Number reared (No.)	25.66	24.58	25.7	30.4	32.25	28
Average Grazing Hours (Hours)	5.75	3.83	4.9	5.46	7.08	5.4
Average distance daily (km)	3.9	2.2	3.1	3.86	5	3.61
Average annual addition in herd size through birth (No.)	6.4	5.2	6.4	8.73	12.7	7.89
Average Annual Reduction in Herd size through	Death (No.) 3.08	1.58	1	3.6	1.66	2.18
	Sale (No.) 3.66	2.5	2.7	3.53	6.83	3.84
Average annual income (Rs)	31835	45417	51000	46461	49750	44892

Table-2: family size, herd ownership, and annual income from livestock

categories	Family size (No)	Live-stock number reared	Average grazing hours	Average distance traveled Daily (Km)	Average annual increase in herd size through birth (no)	Average Annual reduction in herd size through Death (no)	Sale (no)	Average annual income PKRs/-
River side	08	50	7.87	8.87	18	02	08	77812.5
Sub-urban side	08	61	8.72	6.32	23	04	05	65080.0
Interior side	09	24	8.5	10.5	08	01	04	66125.0
Railway / road side	09	42	9.5	6.3	25	03	07	30800.0
Canal side	06	39	8.0	6.8	18	05	08	34333.0
Average	08	43.2	8.5	7.76	18.4	03	6.4	54830.0

SOURCES OF DRINKING WATER AND FEEDING FOR LIVESTOCK

Various sources of drinking water are given in table 3. The herder of sub urban side mainly depend on the water of hand pumps while that of interior side on tube wells and canal side on canals. For other categories depend on river and hand pumps. For

feeding their livestock the herders of river side mainly depend on natural vegetation along rivers, herders of sub-urban side, interior side and railway/road side were mainly feeding their animals on farm land up to the crop harvested (Table 4).

Table 3: Sources of drinking water for livestock.

Categories	WATER					
	Ponds %	Tube Wells %	Hand Pumps %	Canal %	Water Channels %	River %
River side	0	20	28	4	20	28
Sub-urban side	0	29.41	52.94	0	17.64	0
Railway/Road side	0	27.58	34.48	13.79	24.13	0
Interior side	0	47.36	26.31	0	26.31	0
Canal side	0	0	37.03	40.74	22.22	0
Average	0	23.27	34.9	11.3	20.46	28

Table 4: Sources of Feeding for Livestock.

Categories	Feeding				
	Crop Harvested Residues %	Village Waste Land %	River Side %	Canal Side %	Railway Road Side %
River side	31.8	22.72	45.45	0	0
Sub-urban side	76.92	0	0	0	23.07
Railway/Road side	48.38	3.22	3.22	9.67	35.48
Interior side	75	0	0	0	25
Canal side	34.28	17.14	0	34.28	14.28
Average	53.27	8.61	9.73	8.79	19.56

LIVESTOCK MARKETING AND VETERINARY FACILITIES

Marketing and veterinary facilities are presented in Table No. as indicated by the respondents more than 53% of the respondents of the entire categories sale their livestock in market while 47% of all the herders sold their livestock in villages. The average distance of nearest market was 14.3 km., selling of livestock in villages were due to unawareness of market prices and long distance. Generally when the herders/respondents brought their livestock in the market, they were forced to sell their livestock on the terms and conditions of the market, lack of transport facilities also compelled the herders to sell their livestock in their own villages. 73% of the respondents of all the categories committed that they could get medical advices well required while 62% of respondents of all the categories were in view that veterinary medicines / treatments were available. Average distance of nearest veterinary hospital /dispensary was almost 8.4 km (Table 5).

AGRO-GRAZING PROBLEMS AND REQUIREMENTS OF FINANCIAL ASSISTANCE

Non-cooperative attitude of Forest/Irrigation Departments and local farmers, livestock diseases and lack of veterinary facilities were the major problems of the

herders of each category. The herders needed financial assistance in terms of grants for purchase of livestock and veterinary medicine. The average amount of grant demanded by the herders of all categories varied from 60,000-83,000. The herders also keen to utilize the grant money on the essential requirement of the livestock. Livestock can their production like shelter, fodder, concentrates and market (Table 6).

Table 5: Marketing and veterinary facilities available for livestock.

Categories	Marketing Facilities			Veterinary Facilities		
	Selling in Market %	Selling in Village %	Distance to nearest Market (km)	Medical Advice availability %	Availability of Medicines/ Treatment %	Average distance of the nearest Hospital/ Dispensary (km)
River side	42	58	20	83	83	7.5
Sub-urban side	100	-	4	100	100	3.5
Railway/Road side	40	60	21	73	33	9
Interior side	50	50	17	40	60	14.5
Canal side	33	67	10	67	33	7.5
Average	53	47	14.4	73	62	8.4

Table 6: Agro-grazing problems faced by the Herders and Financial Assistance (grant) needed by them from the Government.

Categories	Agro-grazing Problems			Average Amount of Grant Needed (Rs)	For What Purpose
	Non-cooperative attitude of local farmers	Livestock Diseases %	Lack of Veterinary Facilities %		
River side	66.66	33.18	100	60,000	Livestock purchase, fodder, shelter, veterinary care
Sub-urban side	81	38.75	100	55625	Livestock purchase, capital, veterinary care, market to sell
Railway/ Road side	67.91	38.66	100	54,000	Veterinary care, livestock purchase, shelter veterinary care, capital
Interior side	77.77	58.33	100	55000	Veterinary care, market to sell ,capital ,livestock purchase
Canal side	86.66	57.91	72	83,000	Veterinary care, livestock purchase, shelter, capital, market to sell, animal production advice
Average	76	45.3	94.4	61525/-	

SUGGESTIONS FOR IMPROVEMENT OF SOCIO-ECONOMIC STATUS

Respondents of all the categories suggested that their socio-economic conditions can be improved by providing the following:

1. Loan/Grants on minimum interests.
2. Imparting /provision of good breeds of livestock.
3. There must be veterinary hospitals and provision of free medicine.
4. Construction of roads to link the market (Table 7).

Table 7: Suggestions for improvement of social status.

Categories	Loan (%)	Animals of good species (%)	Road and market (%)	Free Medicine (%)	Veterinary Dispensary (%)	Veterinary Hospital (%)	Tube Well (%)	Land for Cultivation (%)
River side	100	-	100	100	100	100	-	100
Sub-urban side	100	100	-	-	-	-	-	-
Railway/ Road side	100	-	100	100	100	100	100	-
Interior side	100	-	100	100	-	100	-	-
Canal side	100	-	100	100	100	-	-	-
Average	100	100	100	100	100	100	100	100

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