The ENVIRON MONITOR

# SOCIO-ECONOMIC EVALUATION OF THE HERDERS PRACTICING AGRO-GRAZING IN DISTRICT FAISALABAD

*Sana Ullah Khan. **M. Mahboob-Ur-Rahman, **Javaid Ahsan & **Mansoor Ali

## ABSTRACT

The practice of agro-grazing was evaluated the year 2011-2012 in Faisalabad district of Punjab province by survey of randomly selected villages. Data from sample villages were collected with the help of structure and pre-tested questionnaire. The herders practicing agro-grazing were 95% illiterate and 10%landless and had their own herds. The average family size of the herders was 8 persons and average herd size was about 43 animals. The herders had an average annual income of about Rs.54830/- from livestock and their products. Their major occupation was agro-grazing and they fed their animals mainly on farmlands (after crop harvest) and on the natural vegetation growing along rivers, canals, railway lines and roads. Lack of forage and non-cooperative attitude of Forest / Irrigation Departments were the major (76%) grazing problems of all the herders. The other grazing problems of the herders were livestock diseases (71%), poor veterinary facilities (39%) and non-cooperative attitude of local farmers (76%). Agro-grazing in the district can be promoted by solving their problems as mentioned above. The herders desired an average amount of Rs. 70,000/- for purchase of livestock.

## INTRODUCTION

Livestock plays an important role in country's economy and contributed about 11.9% to GDP and its share in agriculture is 55.4 % (GOP 2012-13 ) .The role of livestock in rural economy may be realized from the fact that it contributes 30-40 % of income. Livestock resources are increasing at the rate of 2-3% annually in the country 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). Scientific analysis of farming ecosystem justifies the keeping of small number of grazing animals in the farmlands. The reason for this practice is that resource utilization of the farms is far from being complete.There is always some cropped as well as un-cropped material that remains un-harvested and goes waste. This material is generally very thinly spread over the fields and is uneconomical for manual and mechanical harvesting. Moreover, this material is not equally available throughout the year. This waste material can be best harvested and utilized for grazing by livestock only .In addition to providing extra income for grazer families, agro-grazing is also beneficial in terms of suppressing weeds, insect, pests harboring on weeds and providing nutrient rich excreta as organic manure for the fields (Quraishi, 1998).

With the introduction of more intensive farming 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, the herders 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 dep nd 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 1.44 million acres, out of which 1.18 million acres is cultivated while the remaining area is un-cultivated, culture-able wasteland and not available for cultivation. In the year 2011 and 2012 the Area under Kharif and Rabi fodder crops during the study during year2011-2012 were 0.23 & 0.16 million acres respectively. Faisalabad District has variety of

*Director, Punjab Forestry Research Institute, Faisalabad
** Research Officers, Punjab Forestry Research Institute, Faisalabad

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, this study was conducted to evaluate the socio-economic status of local herders practicing agro-grazing at different localities in Faisalabad district.

## MATERIALS AND METHODS

The study was conducted in the district Faisalabad of Punjab province during 2011-2012.The relevant information of the district regarding land utilization, livestock, and soil were collected from concern Executive District officers. An interview schedule was prepared to collect the needful information from the herders. Who mostly depend on grazing livestock as their major source of income. The interview schedule was pre-tested prior to conducting the actual survey and 156 No of herders were interviewed from 78 randomly selected villages according to the following pattern.

| Sr. No. | Categories | No. of Villages | No. of Herders |
|---|---|---|---|
| 1. | River side | 12 | 24 |
| 2. | Canal side | 12 | 24 |
| 3. | Road/Railway side | 18 | 36 |
| 4. | Sub –Urban side | 18 | 36 |
| 5. | Interior side | 18 | 36 |

## RESULTS AND DISCUSSION

### Literacy Level, Landownership and Major Occupations

95% of the respondents were illiterate from all the categories and 100% were land less and keeping livestock and agro-grazing as their major occupation. The high illiteracy in the herders might be attributed to the poor socio-economic conditions of the herders that forced them to involve themselves in agro-grazing. Similar findings were reported by Azam (1991) in district Bahawapur, Naseem (1991) in district Multan and Gulzar (2004) in Gujranwala respectively. All the young male family members of the herders of each category were engaged in agro-grazing while too young/old male family members were not involved in agro-grazing. Female family members also participate in agro- grazing to some extent on river side.

### Family Size, Herd-ownership and Income from Livestock

Family size of all categories of the herders varied from 6 to 9 persons (Table-1).These persons included either children or old relatives in a joint family structure. The reason for this large family size might be high illiteracy level and poor socio-economic conditions of the herders. Members of such families helped to support the families in terms of fuel wood collection, labor on daily wages etc. About 100 percent of the herders had their own herds. Average members of livestock of herders in various categories varied between 24 to 61 animals in. Similar findings were reported by Ahmad (2002) in district Rajanpur And Gulzar (2004) in district Gujranwala. The herders spent about 8.5 hours in grazing their livestock daily at various grazing places of the district .They used to travel daily a distance of 7-9 Km for the grazing purpose. Average annual increase in their herd size was about 18.4 animals. This addition in herd size was only through birth of animal not from animal purchase. On the average herders of all the categories faced death of about 3 animals annually which may be due to of poor veterinary facilities at local level in the district. The herders of each category sold 6.4 animals annually in order to meet their domestic needs. An about average annual income from livestock is 55,000 which varied from Rs. 30,000 to 78,000/-.

**Table-1: Family Size, Herd-ownership and Annual Income from Livestock**

| Categories | Family size (No) | Livestock 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 | | Average annual income Rs/- |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Death (No) | Sale (No) | |
| 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 / roadside | 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** |

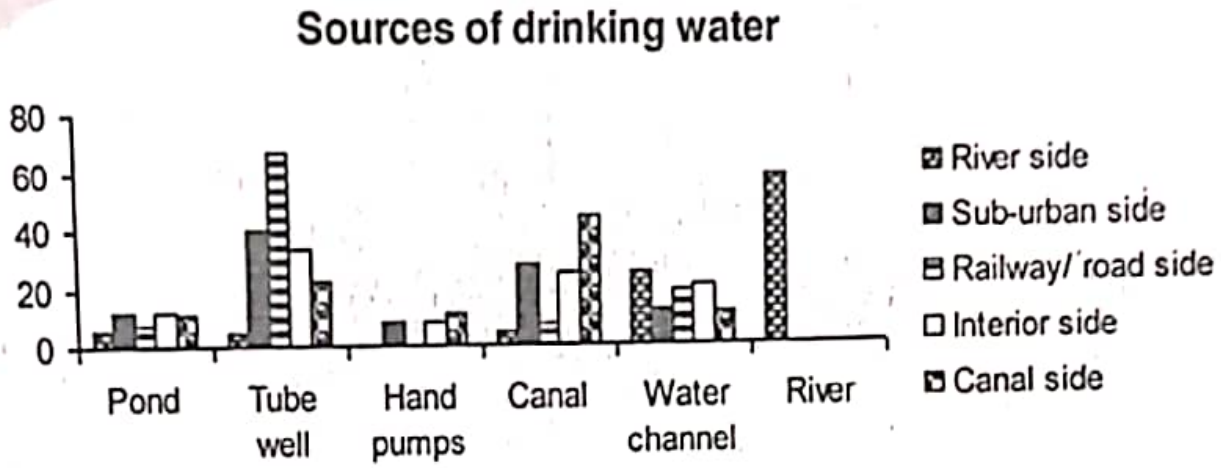
**Sources of Drinking Water and Feeding**

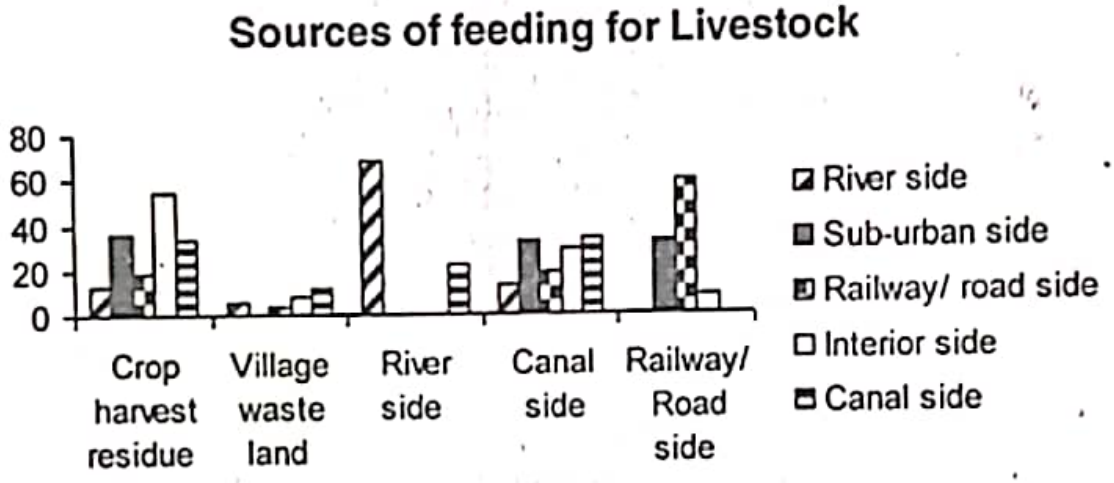
Various sources of drinking water and feeding are given in Table – 2. Riverside and canal side herders mainly depended on the water of rivers and canals respectively while the herders of all other categories depended on tube wells and water channels. For feeding purpose the herders of riverside, canal side and railway/road side depended on natural vegetation along rivers, canals, and railway/roads respectively. The herders of all other categories were mainly feeding their animals on farmlands after the crop harvest as mentioned in table -2.

Almost similar findings were reported by Naseem (1991) in Multan district, Wasaya (1993) in D.G. Khan District and Gulzar (2004) in Gujranwala district respectively. The herders of interior side (54.2%) were mainly feeding their animals on farmlands.

**Table 2: Sources of Drinking Water and Feeding for Livestock**

| | Water | | | | | | Feeding | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Categories | Pond (%) | Tube well (%) | Hand pump (%) | Canal (%) | Water Channel (%) | River (%) | Crop harvest residue (%) | Village waste land (%) | River side (%) | Canal side (%) | Railway/Road side (%) |
| River side | 06 | 05 | --- | 05 | 25 | 59 | 12.5 | 6.25 | 68.75 | 12.5 | --- |
| Sub-urban side | 12 | 40 | 08 | 28 | 12 | --- | 36 | --- | --- | 32 | 32 |
| Railway/ road side | 7.4 | 66.7 | --- | 7.4 | 18.5 | --- | 18.5 | 3.9 | --- | 18.5 | 59.2 |
| Interior side | 12.5 | 33.4 | 8.3 | 25 | 20.8 | --- | 54.2 | 8.3 | --- | 29.2 | 8.3 |
| Canal side | 11.1 | 22.2 | 11.1 | 44.5 | 11.1 | --- | 33.3 | 11.2 | 22.2 | 33.3 | --- |
| **Average** | **9.8** | **33.5** | **5.50** | **21.9** | **17.5** | **11.8** | **30.9** | **5.9** | **18.2** | **25.1** | **19.9** |



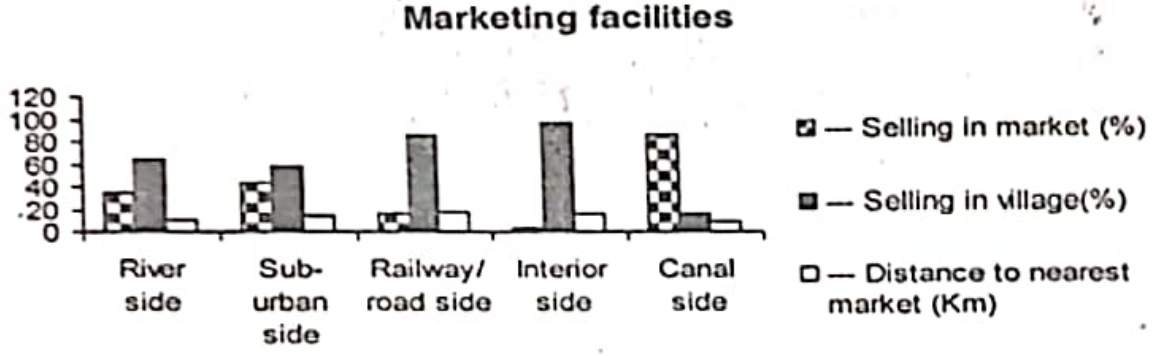




**Livestock Marketing and Veterinary Facilities**

Marketing and veterinary facilities as indicated by the respondents are given in the table – 3. More than 63% of the herders of all the categories sold their livestock in the local villages throughout the year. While up to 37% of the herders sold their livestock in the nearest animal markets. Almost similar findings were reported by Gulzar (2001 & 2004) about the herders of the district Gujranwala. The average distance of the nearest market was about 13 km. practicing of selling livestock in the local villages by the greater percentage of the herders was due to high illiteracy and distant location of the animal markets. Occasionally when the herders brought their animals in the markets, they were compelled to sell their animals on the terms and conditions of the Buparies (middleman in the animal markets). Selfish behavior of the Buparies in the markets and lack of animal transport facilities also forced them to sell their animals in the local villages. About 60% of herders of all the categories received medical advice from the local veterinary hospitals for their livestock. Average distance of the nearest veterinary hospital/dispensary was about 16.4 km. Table -3 revealed that the mortality rate of animals can be minimized if proper veterinary facilities are provided.

**Table-3: Marketing and Veterinary Facilities Available for Livestock**

| Categories | Marketing Facilities | | | Veterinary Facilities | | |
|---|---|---|---|---|---|---|
| | Selling in market (%) | Selling in village (%) | Distance to nearest market (Km) | Medical advise available (%) | Availability of medicines/ treatment (%) | Average distance of the nearest hospital/ dispensary (Km) |
| River side | 35 | 65 | 10 | 60 | 70 | 16 |
| Sub-urban side | 43 | 57 | 14 | 45 | 83 | 15 |
| Railway/ road side | 15 | 85 | 18 | 40 | 30 | 20 |
| Interior side | 04 | 96 | 15 | 47 | 50 | 22 |
| Canal side | 85 | 15 | 09 | 70 | 67 | 09 |
| **Average** | **36.4** | **63.6** | **13.2** | **59.4** | **60** | **16.4** |

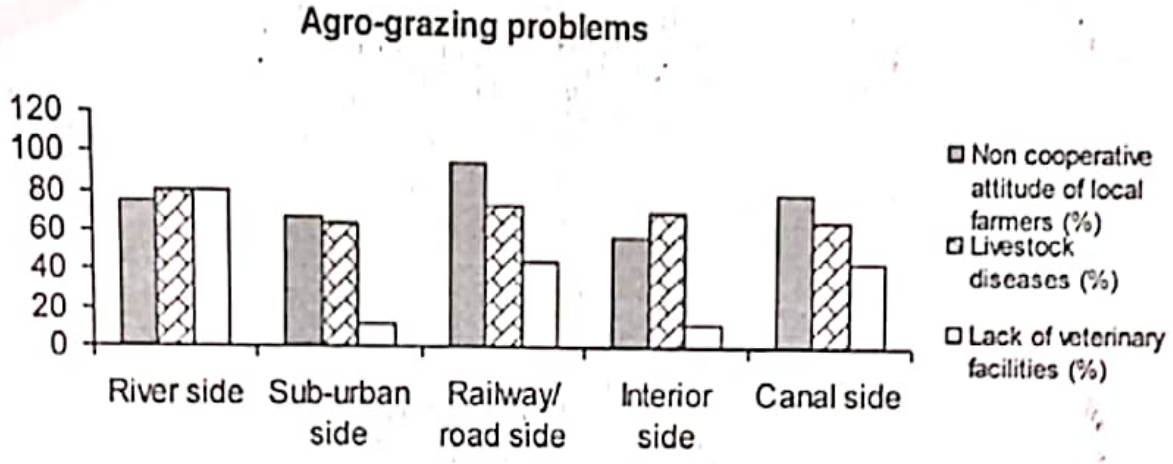



## Grazing Problems and Needs of Financial Assistance

Livestock diseases, non-cooperative attitude of Forest/Irrigation Departments and local farmers were the major (75%) grazing problems of the herders of each category. Other grazing problems faced by the herders are given in Table – 4. The herders needed financial assistance in terms of grant for improving their live stocks. The average amount of grant demanded by the herders of all the categories varied from Rs. 50,000 to 90,000/-. The herders wanted to utilize money of the grant on their essential requirements of livestock production like shelter, fodders, concentrates, veterinary medicines etc. Gulzar (2004) reported similar perceptions in district Gujranwala where 100 percent respondents demanded grant for improving their livestock.

**Table4: 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 | Utilization of grant |
|---|---|---|---|---|---|
| | Non cooperative attitude of local farmers (%) | Livestock diseases (%) | Lack of veterinary facilities (%) | | |
| River side | 75 | 81.25 | 81.25 | 75,000/- | Livestock/ Medicine |
| Sub-urban side | 68 | 64 | 12 | 65,000/- | Livestock/ Fertilizer |
| Railway/ road side | 96 | 74.07 | 44.44 | 90,000/- | Livestock |
| Interior side | 58.33 | 70.83 | 12.5 | 58,000/- | Livestock |
| Canal side | 81.11 | 66.66 | 44.44 | 50,000/- | Livestock |
| **Average** | **76** | **71** | **39** | **67,000/-** | |




## RECOMMENDATIONS

On the basis of findings of the study, it is recommended that access to the market should be improved through development of infra-structure. Necessary education and training about livestock rearing should be imparted to herders in order to enable them to improve their socio-economic conditions and livestock quality. Appropriate veterinary facilities and financial assistance will be very helpful in this respect. Better feeding of livestock could be achieved if vertical rather than horizontal expansion of livestock production is followed.

## REFERENCES


- Ahmad, MF. 2002. Studies on extent and problems of agro-grazing in district Rajanpur. M.Sc. Thesis, Department of Forestry, University of Agriculture, Faisalabad.
- Azam, M.B. 1991. Studies on extent and problems of agro-grazing in district Bahawalpur. M.Sc. Thesis, Department of Forestry, University of Agriculture, Faisalabad.
- Government of Pakistan (2012-2013). Economic Survey of Pakistan. Finance Division, Economic Advisors Wing, Islamabad.
- Gulzar, S. 2001. Studies on extent and problems of agro-grazing in district Gujranwala. M.Sc. Thesis, Department of Forestry, University of Agriculture, Faisalabad.
- Gulzar, Saeed et al. 2004. Socio-economic evaluation of the herders practicing agro-grazing in district Gujranwala.
- Khalifa, T.A. 2004. Development of livestock in Balochistan. Dawn Economic and Business Review. Feb. 5-11, p-3.
- M. Farooq Ahmad, et al, 2004. Socio-economic evaluation of the herders practicing agro-grazing in district Rajanpur.
- Naseem, S. 1991. Studies on extent and problems of agro-grazing in district Multan. M.Sc. Thesis, Department of Forestry, University of Agriculture, Faisalabad.
- Quraishi, M.A.A. 1998. Basics of Forestry and Allied Sciences. Vol. 1. A-One publishers, Urdu Bazar, Lahore. P: 310.
- Samdani, Z. 2004. Diminishing livestock population. Dawn Economic and Business Review. Feb. 9-15, p-3.
- Wasaya, A. 1993. Studies on extent and problems of agro-grazing in district D.G. Khan. M.Sc. Thesis, Department of Forestry, University of Agriculture, Faisalabad.