

Rural Development by Livestock Extension Education in Southern Punjab

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Abstract

Agriculture community of Pakistan mostly consists on small farmers which have various limitations in their routine farming practices, so due to this reason per yield level is ranged between lower to middle economy to cater the food requirements of growing population. Current study was designed and implemented with focus on rural development in southern Punjab. Target was tried to be met by livestock extension education in three districts including Multan, Rajanpur and Muzzafargarh. Different remote and rural areas of these districts were selected. Workshops, corner meetings, seminars of male units were conducted to educate them about modern husbandry practices to strengthen the livestock extension education. People were found to be very keen about the latest knowledge and practices used in the livestock science and showed their maximum interest for learning. Deworming was performed to their animals by using injection Ivermectin and 3rd generation antibiotic Enrofloxacin was used to treat the general infections of the animals. These medication services were performed free of cost to the farmers that really had created their interest about the welfare of animals. The farmers were not thorough known about the feed and water requirements of the animals, pre-infection precautions, breeding practices, calf and dam care and mainly the routine management practices especially about the housing and comfort of their animals. These learning practices definitely will help them to build their basic knowledge about animal husbandry and this will lead to uplift their socioeconomic status. This will pave a way for further improvements and measures about rural development and poverty alleviation in Pakistan.

Keywords: Livestock; Extension; Punjab; Rural; Poverty

Introduction

Pakistan's economy is primarily agriculture oriented; it shares 18.9% in GDP. Main sub-sector of agriculture is livestock and it plays a vital role in rural socioeconomic uplift. Almost eight million families practice livestock keeping and derive their 35% income from these production activities. It is main source of livelihood for the rural poor people in the country. It is the only source of income for the rural most marginal people and they can use it when they need. Definitely this sector can play a pivotal role for the poverty alleviation in Pakistan. During the previous year livestock sector contributed 58.9% in agriculture value addition and 11.1% to the GDP. At constant cost factor the gross value addition of livestock has increased from PKR1327 billion in 2017 to PKR 1377 billion in 2018 with an increase of 3.8% than last year [1]. Livestock sector is very subsistent which is completely dominated by the small farmers which meet their needs of food security (milk & meat) and routine cash income. It is a secure source of income generation and employment for the landless, poor and small holder rural people. It helps to reduce the income variability especially at the time when the crop failure occurs due to some reasons [2].

It is an important source of subsistence and income for the pastoral people as well. Pakistan is bestowed with high yielding genetically potent animals. Currently Pakistan has 46.1 million cattle, 38.8 million buffalo, 30.5 million sheep, 74.1 million goats and 1.1 million heads camel [1]. The economy of herders and pastoralists totally depends upon livestock sector. Their living status has improved a lot as compared to previous years. The livestock species play very important economic, social and cultural roles for rural households as they contribute to improve income and wellbeing of the farm family. Livestock helps in food supply, family nutrition, income, asset savings, soil productivity, livelihoods, transport, agricultural traction, diversification and sustainable production, family and community employment, ritual purposes and social status [2].

Studies showed that 20.16% of our population earns only \$1.25 a day, while 60.19% earns \$2 a day. The population that lives under the poverty line is 22.3% which is a huge portion. This is the Figure 1 reported by the government but the World Bank and the United Nations development program assessed this percentage as 25-28%. These organizations claim that Pakistan is far better than India and Bangladesh. So there is a hope and great potential for development in our economy. The human development index of Pakistan is 0.549 a far better than these countries. Rural development may be done by evolving a human resource development plan capable of redirecting the present elitist education towards value addition and technical education [3]. Human resource development is the need of the key for rural development [4]. According to a report 'Poverty and Rural Development in Pakistan' by institute of Agriculture Extension and Rural Development UAF, the development of Pakistan is not possible by ignoring the development of its rural areas. The process of improving the life quality and economics of the relatively isolated and sparsely populated areas is called as rural development.

Punjab is the 2nd largest province by area and 1st largest by population of Pakistan. Estimated population of Punjab is more than 10 corers as in 2015 [5]. Its economy is dominant in agriculture sector and contributing a major share to the national GDP ranging from

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Figure 1: Conducting Seminars for Livestock Extension Education in Southern Punjab.

56.1-61.5%. More than 60% population is residing in rural areas [6]. Poverty ratio is very high in south Punjab as compared to north zone. For an example Sialkot is a prosperous district of northern part having a poverty rate of 5.63% while Rajanpur is a district of southern part with a poverty rate of 60.05% [7]. Multan, Rajanpur and Muzzafargarh are the main districts having the remote areas with poorest rural population of Pakistan.

The development of rural masses of remote areas of the south Punjab was prime objective of this study which was tried to be met by livestock extension education.

Methodology

Rural development was focused by conducting the seminars, corner meetings, workshops, training programs, farmer's education, rural visits about the livestock keepings, housing, feeding, commercial orientation, value addition, health and husbandry of the animals.

Fortnightly visits were planned in remote areas of Multan, Rajanpur and Muzzafargarh. All these areas were focused and covered under this project. The duration of completion of this study was December 2017 to August 2018. Thirty remote areas were selected as 10 from each district to cover the objectives of this project (Table 1).

Weekly and fortnightly visits were planned in remote areas of above said districts. All the three districts of the south Punjab was focused and covered under this project. Following equipment and facilities

were used to complete the project as December 2017-August 2018. After the preparation of literature which covers the major diseases and the modern husbandry practices, the rest of activities were conducted simultaneously (Table 2).

Multan	Rajanpur	Muzzafargarh
Sher Shah	Jampur	Jaggat Pur
Makhdom Rasheed	Dajal	Pepal Wala
Budhala Sunt	Lal Garh	Mubarak Pur
Qadirpur Rawan	Fateh Pur	Shah Jamal
Saghba Maral	Haji Pur	Khoji Wala
Shujaabad	Rojhan	Mehar Pur
Matti Tul	Umar Kot	Mondka
Lutaf Abad	Kot Mithan	Meran Hayat
Bund Bosan	Head Hamad	Shah Garh
Qasim Bella	Aasni	Tiba Karema Abad

Table 1: Rural development was focused by conducting the seminars.

Activities	Time Frame
Initial survey	3-4 Weeks
Preparation of Literature/review of Literature	3-4 Weeks
Conduction of seminars/corner meetings/workshops	5 months
Preparation of Final report	2 Weeks

Table 2: Weekly and fortnightly visits were planned in remote areas of above said districts.

Discussion

According to the reports found from the livestock keepers their socioeconomic status has been grown up as the Livestock sector is an important source of protein rich products which plays a pivotal role in the economy of developing countries of the world. It is an important generator of employment. It provides cushion for food shortages, means of storing wealth, as a source of fuel and fertilizer, a source of transportation and traction in agriculture production [8]. Nonetheless, the availability and quality of livestock services influence the full productive potential of this sector [9].

Production and health services are the two major functional categories of livestock services. The production services include research and extension education related to livestock husbandry practices and the provision of inputs like feed, seed and artificial insemination. Livestock productivity can be improved by production services such as genetic upgrading of animals by means of artificial insemination, improved feed formulations, use of improved forages and changes in current management practices. On the other hand, the health services include preventive and curative services with the pharmaceuticals provision. Preventive services consist of vector control, vaccination, eradication programs and disease control measures like quarantines, movement restrictions and the slaughter of diseased animals [10].

Consequently, veterinary professionals, governmental and non-governmental donors in developing countries, stockowners (including the commercial farmers, sedentary or mixed type farm producers, small backyard raisers, pastoralists), herders and consumers are the major players which shape the livestock services. Veterinary paraprofessionals including field technicians, vaccinators and producer representatives assist veterinarians with their duties. In some of the countries, trained veterinarians are in limited number and they are unwilling to serve and work in rural remote areas which ultimately have made paraprofessionals very valuable. In most cases sale agents of agribusiness, veterinary pharmaceuticals and veterinarians provide information regarding improved production services, hygiene and sanitation, livestock upgrading and feeding as complementary services to farmers.

In most cases veterinarians, sale agents of agribusiness and veterinary pharmaceutical companies, provide information regarding livestock upgrading, improved production practices, hygiene and sanitation, and feeding as a complementary service to farmers [11].

But the people don't use the modern husbandry practices. Livestock and dairy development department has put forward their services a lot more but still those are not fruitful enough to serve the people in their best regards. Most of the livestock keepers don't know the significance of prophylactic measures to be adopted and their role in the socio economics of their indigenous genetic resource. The dewormers and vaccination knowledge gap exists and livestock herders don't know the actual practices and their benefits as well. Whole of the family doing their house hold activities for their animals and gaining no profit in net shell calculations. The knowledge about the selection of the best breed animal (genetic selection) is not available and the farmers/herders even don't know which of their animals they have to breed with which type of semen, and this ultimately causes the wasting of their important indigenous animal genetic resource. The actual time of vaccination and treatment is not known to the herders and mostly people do ethno veterinary treatments. Indigenous knowledge is a resourceful addition to the animal science but no paper of material authenticated with the proves of experience usage is available for this purpose.

Agriculture is the principle means of the livelihood (about 40-90% of population) in the developing countries [12]. The State of Food and Agriculture Reports from [13] concluded that reducing food insecurity and poverty is not simply a question of generating more income or enhancing agricultural productivity [14]. Have reported that the capability, quality and performance of the farmers in agriculture sector constitute the fundamental indicators of the level of the agricultural setup productivity, efficiency, development and sustainability. Moreover good performance and high capability are not the inborn qualities the farmers are acquired. Most of the farmers in developing countries have a very low level of formal education as only few have the opportunity to study agriculture education in their formal schooling system. In contrast, as observed in the developed countries, the education is important to develop the livestock and agriculture sectors. Consequently, extension services are extremely important to educate the farmers while learning and research accompanies adoption of new tools and technologies which are especially important for the advancement of the farmers/herders [15].

It is an obvious fact derived from the Global Consultation on Agricultural Extension that farm people generally increase their efficiency and productivity in response to the receipt of non-formal education through the livestock/agriculture extension programs [16]. Still, one out of the five farmers receives extension resources in the developing countries of the world [17]. In the developing countries, the government is responsible for the livestock services while in developed ones, these are being performed in partnership with or totally transferred to the private sector. Livestock development programs can play a very pivotal role in the reduction of rural poverty in the developing countries [18]. Secondly in these countries, the demand for the animal products is growing very fast and can be expected to continue at same pace.

Mostly people use their own formulations for the feeding of their animals and not only the lack of combination of ingredients but also there is lack of the availability of blend of ingredients. People mostly use the single ingredient which is very indigenous to them and they don't want to change it. Some people use the formulation based on the experiences of their forefathers and they are using it generations to generations without any alteration and the most unfortunate thing observed is that they even don't want a change. The reason behind is that the personals available for the veterinary sector inly compose on the practitioners which don't want to guide the farmers instead they just focus on their treatment business. People give special response to the knowledge delivery and they welcomed our project open heartedly and many of them take the contact numbers and often use to call and gain information about the management practices and the modern husbandry practices.

Conclusion

The way forward is to plan such sort of projects and studies for other districts of southern Punjab as well. Definitely by the help of these grants and projects we can educate our livestock herders which belong to more than 35 million rural people and more than 8 million rural families, a sizable population to which if we educate about the livestock husbandry, certainly will pave a way for the betterment of their economics as well as the GDP of the country.

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