

The Role of Livestock in Poverty Reduction: A Comparative Analysis of Tehsil Wadh and Bela

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Abstract

The study was carried out at tehsil Bela and Wadh using random sampling method. The data was collected from 05 union councils (UC) of each tehsil. From each UC 20 farmers were interviewed. Data was collected out of 200 respondents to complete this survey. The result revealed that a majority of the livestock owners earned Rs. 25,000 – Rs. 30,000 per month, while 29% and 25% of them earned Rs. 20,001 – Rs. 25,000 per month, on average. A majority of the livestock owners (55% and 47%) were of the view that income earned from livestock fulfill their needs while 16% from Wadh and 13% from Bela reported that income received from livestock farming contribute meaningfully to meeting their domestic needs to a much extent. 14% from Wadh and 17% from Bela are of the view that income received from livestock farming fulfilled their domestic needs to an average extent. Regression analysis revealed that livestock ownership significantly improved welfare in form of greater household income. From the regression analysis, it was also found that cows and camel ownership affect household income the most. Thus, cows and camels may be the most important livestock that can be used to improve smallholder farmers' welfare through suitable policy actions in Pakistan. Based on the findings, the study concludes that livestock production is an integral part of rural farmers in tehsil Bela and Wadh, contributing towards development particularly in those areas. Farmers own livestock as one of the prime income generating source to support their livelihood.

Keywords: Livestock; Poverty Reduction; Rural Farmers; Balochistan

Introduction

Livestock has an important role in the promoting of socio-economic development in rural areas. Nearly 8 million families are associated with livestock farming which not only determines their income but also their livelihood too. Moreover, livestock is a source of cash income. At the same time, it also provides food security to households (Ali, 2017). Income from livestock in developing countries represents a significant share of farm households. Income securities and a large portion of farm-dependent farm families stock for livelihood (Thornton *et al.*, 2002). Livestock also plays an important role in poverty reduction and functions as a source of valuable foreign exchange earnings for Pakistan. During 2017-18, livestock contributed 58% percent to Pakistan's total Gross Domestic Production (GDP) and around 11% to the agricultural GDP. Presently, livestock can be said to be one of the critical sectors of the Pakistan economy in terms of its growth potential and contribution to GDP growth. Moreover, gross value addition of livestock at constant prices of 2017-18 has increased from, Rs. 1,327 billion (2016-17) to Rs. 1,377 billion (2017-18), showing an increase of 3.8 percent over the same period. Compared to other sectors, growth figure for the Pakis-

tan livestock sector has been quite promising, particularly when the previous year's figures are considered (Iqbal, 2018).

Livestock is a key component of rural economy in many ways. For instance, it is used as a source of transportation and plugging. It also satisfies the households need for milk, yoghurt, butter and whey (Garcia *et al.*, 2003). The livestock sector also helps to protect the income of rural households in case of crop failures owing to some natural catastrophe and also provide a safety net to households. Under favourable weather conditions, livestock increases rural incomes and provides them with nutrients from its milk and meat. Moreover, livestock provide a huge opportunity of employment and of farm occupation. Livestock sector is also the main source of food, animal protein, employment and income (Kumar *et al.*, 2004).

The financial prosperity potentials of the livestock sector are enormous. For example, money can be generated from livestock products regularly (milk, eggs) or sporadically (live animals, wool, meat, hides). According to Kulkarni (2012), dairy development has been shown to increase income, consumption and repayment capacity of households in India.

In Balochistan, livestock population encompasses goats, sheep, camels, donkeys, horses, cattle, poultry and buffaloes, although the buffalo population is limited to some areas. Among these livestock, the most significant in Balochistan are sheep, camel and goats due to their high survival rates under the environmental conditions of the province. Additionally, these three livestock species can easily be nourished with dry land trees, shrubs and small herbs.

Shafiq (2017) illustrate that livestock farming can be broadened by enabling females to take an interest economically in this field. In this regard, Balochistan comprises two noteworthy belts, Baloch and Pashtoon belt. Females living in Baloch belt, are increasingly dynamic and lithe in their participation in the livestock sector. Moreover, females living in Pashtoon belt additionally participate in domestic animal husbandry within the limit of household restrictions. In general, female participation in the livestock business relies to a great extent on the benevolence of their male heads. Considering the potentials of greater female participation in domestic livestock production, improving their participation has been an area of interest in the quest for wealth creation and poverty alleviation in Balochistan and other settlements. Consequently, several research interests can be observed in recent times on how livestock influences poverty reduction in those parts.

For instance, Khan *et al.* (2015) concluded a study to know the role of livestock in poverty reduction in Lasbela district, Balochistan. They investigated on hundred farmers from five tehsils of district Lasbela through a well-developed questionnaire. Their results indicated that 58.0% of the farmers believe livestock is the main source of their income while 29 % of that farmers believed that livestock is their secondary source of income. The result indicates that high yielding animals, price of milk, use of new technologies, availability of infrastructure, accessibility to credit and health care of the animals have significant effect on households' returns and help farmers in increasing their total disposable income. They have concluded that the households' participation in various livestock related activities contribute significantly in generating more income that consequently helps in poverty reduction.

Shafiq (2017) described that livestock animals are key contributors in the economy of Balochistan and asserted that livestock production is vital to the wellbeing of migrant families in those areas. As such, traveling families are known to frequently include their women and youngsters in the raising of livestock animals. They are additionally associated with draining and milk handling, poultry, and egg selling. Moreover, females have a critical job in the improvement of livestock animal part in Balochistan. Since livestock animals have significant impact in farming areas, its impact can be amplified by enabling women participation in livestock production in Balochistan.

Khan and Iqbal (2002) examined the impact of livestock on wellbeing in Pakistan and lamented that poor accessibility of supplements is a main hindering factor. They argue that supplement repository like rangelands are exposed to weakening but are yet to receive appropriate policy attention that can help improve their efficiency. Based on these assertions, they recommend utilizing non-ordinary feed resources to improve animal nourishing and efficacy of rangelands and ranching in improving livestock production in Pakistan.

Habib *et al.* (2016) appraised feed free market activity for animals in Pakistan. The outcomes demonstrated that indigenous feed assets were short for animals and poultry prerequisites. The free market activity hole for dry biomass, rough protein (CP) and metabolize able vitality (ME) were 19.4%, 37.2% and 38.0%, separately. Harvest build-ups were the overwhelming source containing 58.8% of the absolute feed supply, while grain and brushing shared 23.8% and 9.2%, individually. Grains and side-effects contributed 8.2% to the feed supply. In an attempt to fill this hole, huge amounts of oilseed suppers were imported for the most part for the poultry area. Maize was the real feed grain utilized in poultry and ruminant proportions, and they together expended 79% of the nation's all out maize produce. In light of the foreseen fast development in poultry, dairy and feedlot cultivating in Pakistan, the feed hole will further expand and this warrants future spotlight on effective and serious usage of the nearby ordinary and nonconventional feed assets. The information and data displayed in the paper gave a sound premise to achieve practical development of animal production in Pakistan.

According to Ali and Chaudhry (2010), the majority of the world's economies are agrarian in nature. Pakistan's economy is one of those in which the majority of the population lives in rural areas. They assert that the agricultural sector is the most important source of employment in Pakistan and is dominated by farming and livestock activities. Therefore, they examined the effect of livestock animal yield on poverty in Pakistan from 1972 to 2010, using yearly time data. The analysis involved time series econometrics, including unit root test, Johansen's cointegration approach, and vector autoregressive models. According to the results, livestock animal yield was found to be inversely related to poverty level in Pakistan. The causality tests were performed to determine the relationship between livestock animal yield, credit to the private sector, consumption, and wellbeing. The causality test results confirmed bidirectional relationship between animal yield and welfare. On the basis of the findings, the authors suggest that improving livestock production in Pakistan would be beneficial in eliminating poverty and generating rural income.

Elsewhere, Jamal (2005) examined the influence of livestock exploration to improve livelihood among rural and urban families. The paper gauged livestock farming independently for urban and provincial territories. These impact of livestock farming on welfare was analysed with the assistance of non-money related measures. In general, 33 percent individuals were poor when among non-livestock farming. Iqbal (1994), revealed that small-scale ranchers and farmers in Barani zones by and large get 25% of their livelihoods from animal parts, while the extent of income from these activities in flooded zones were evaluated around 10%.

Hollmann *et al.* (2005) endeavoured to comprehend the significance of livestock animals in the battle against poverty by interviewing 143 ranchers owning no cows in five diverse picked locales in Colombia. Livestock animals were found to have key significance in improving wellbeing among the surveyed families. They also found that the poor are increasingly helpless in dry season when the rains are scarce leading to low harvest and hardship. Based on their findings, the authors recommend that smallholder ranchers need access to insurance and healthcare for their livestock to improve their livelihood.

Ali (2007) discovered that livestock animals play an important role in the wellbeing improvement, reducing poverty and reducing wage disparities in India's country territories. The author discovered livestock animal dispersal to be more common than land ownership in the country. More than 70% of small and landless rural family units in India owned livestock animals. Because of low cost of production and high consumption for small creatures, these families own several livestock, including hens, sheep, and goats. Promotion of livestock can therefore be a development motor and a potential area in expanding the rural dweller's profit, value production and wealth creation, and thus lessening poverty in the economy.

Pica et al. (2008) establish a beneficial relationship between animal husbandry and development using a broad dataset from 66 countries covering 1961 to 2003. Livestock sector was observed to be an important source of per-capita GDP growth in 34 of the 67 economies considered. In addition, there is was a bidirectional relationship between livestock GDP and financial development in nine countries.

By and large, the importance of livestock production to the livelihood particularly in the rural areas and with emphasis to the developing countries cannot be overstated. In Pakistan, poverty alleviation has been a major policy focus with many attempts made towards rural empowerment. As a result of this poverty reduction strategy, there are have been notable declining trends in the poverty at all levels in Pakistan. Nonetheless, there is need to constantly assess the state of welfare among target populations in order to guide the policy process and to track the success of such welfare improvement strategies. Consequently, this study aims to quantify the effect of livestock on farmers' income and to obtain the perception of farmers regarding the role of livestock in their livelihood in tehsil Wadh and Bela. The rest of the paper is organized thus: section 2 covers materials and analysis methods which is followed by a presentation of the empirical results in section 3. The paper is concluded in section 4 with discussion of results and conclusion.

Materials and Methods

According to the Pakistan Bureau of Statistics, the population of this study comprises of 101,307 human inhabitants in Wadh and 104,438 in Bela. We took our data on the basis of union councils which were same and having no difference with respect to population. Union councils of tehsil Wadh are Arenji, Badari. Loop-Wadh and Waheer. The Union councils of tehsil Bela are Bela, Welpat Shumali, Welpat Junubi, Kathor and Gador. In each union council we had distributed 20 questionnaires for data collection. Figures 1 and 2 respectively show the Ariel map of the two locations where data was collected.

For data collection, the study relied on questionnaires which were distributed to 100 respondents selected randomly in each location (i.e., Wadh and Bela). The questionnaire contained information regarding demographic features of the respondents such as age, gender, education, marital status, occupation, farming experience, source of income (i.e., livestock farming, livestock and crop farming, livestock and services, livestock, crops and services), fulfilling their domestic needs, and the contribution of livestock farming in socio-economic aspects (i.e. living standard, education of the children, empowerment, family income, health, food requirements and to keep himself busy).

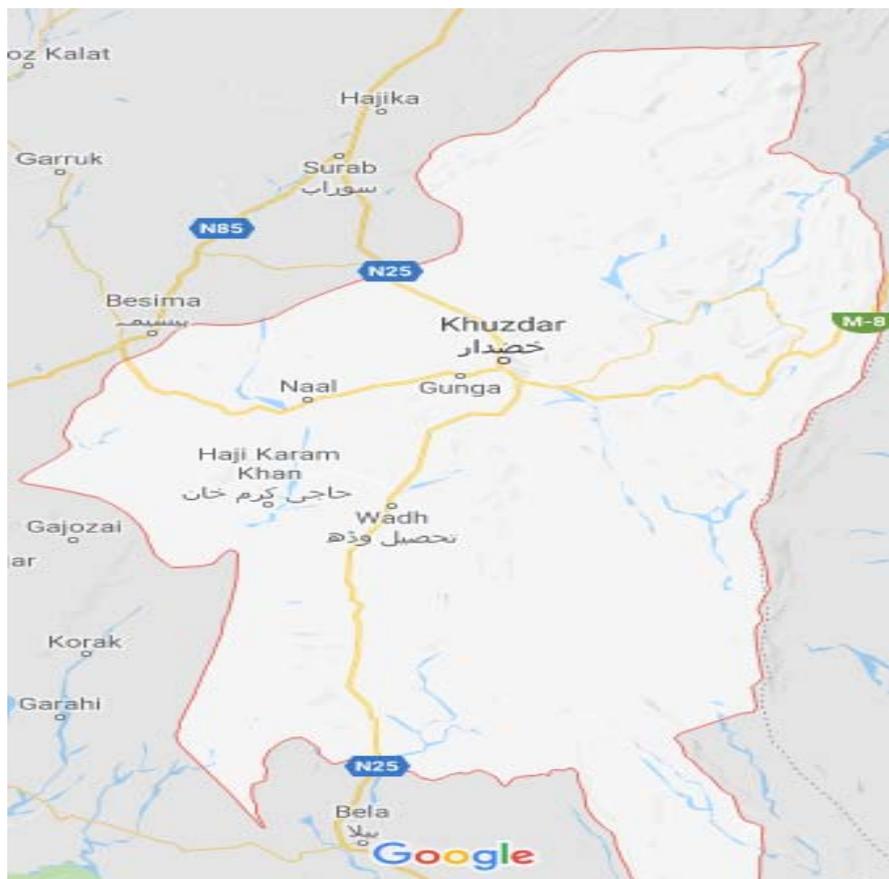


Figure 1. Map of tehsil Wadh (Source: Google Maps)



Figure 2. Ariel Map of tehsil Bela (Source: Google Maps)

Results

Descriptive Analysis

The demographic distribution of the respondents has been summarized in Table 1 according to location. The result shows that a greater proportion of the respondents are aged from 31 – 40 in both Wadh and Bela. Also, the least number of the respondents are aged 51 – 60 in both areas but there are more persons aged 51 – 60 in the Wadh sample (14) than in the Bela sample (8). Looking at the distribution of the respondents by gender, we find that most are male both in the Wadh sample (87) and in the Bela sample (95). The level of education among the respondents is generally low. Most of the respondents in the Wadh sample (45) had not attained beyond primary education while most in the Bela sample (22) had not received any formal education. However, there are more respondents with higher education levels in the Bela sample than in the Wadh sample. For instance, only 5 respondents in the Wadh sample had received Matric education level whereas, in the Bela sample 32 respondents had the Matric category of education as their highest education level. Further, 32 respondents in the Bela sample had the Fa/FSC education level as their highest education level whereas none in Wadh had this level of education. Likewise, 2 respondents from Bela had completed above Fa/FSC education but no respondent from Wadh had done so. As to be expected, most of the respondents in Wadh (58) and Bela (61) were married as at the time of collecting the data.

Table 1. Distribution of Respondents by Demographic Characteristics

Variable	Categories	Tehsil Wadh		Tehsil Bela	
		N	%	N	%
Age	20 – 30	16	16	41	41
	31 – 40	42	42	42	42
	41 – 50	28	28	19	19
	51 – 60	14	14	8	8
	Total	100	100	100	100
Gender	Male	87	87	95	95
	Female	13	13	5	5
	Total	100	100	100	100
Education	Non formal	35	35	22	22
	Primary	45	45	19	19
	Middle	15	15	15	15
	Matric	5	5	32	32
	Fa/FSC	0	0	10	10
	Above	0	0	2	2
	Total	100	100	100	100
Marital Status	Single	42	42	39	39
	Married	58	58	61	61
	Total	100	100	100	100

Table 2 reports the socioeconomic characteristics of the respondents. According to occupational distribution, most of the respondents are into livestock farming alone in both Wadh (58) and

Bela (54). However, more respondents in Bela (25) combine livestock with farming than in Wadh (16). In Wadh, farming activities are more common than trading among the respondents (22 respondents and 2 respondents respectively) but in Bela, trading activities are more common (25 respondents) than farming activities (8 respondents). A lot of the respondents in Wadh (46) and in Bela (42) have from 21 – 30 years farming experience. An equal number of respondents (34) have from 11 – 20 years farming experience in both locations. Looking at the income source, most of the respondents from Wadh (45) and Bela (40) get their income from combining livestock with crop farming. Those who get income from livestock farming in Wadh (40) are more than those in Bela (35). Respondents who earn income from livestock and services in Wadh (10) are less than those in Bela (15) and persons who combine livestock, crop farming, and services are more in Bela (10) than in Wadh (5). With specific focus on the amount of livestock income earned, we find that a majority earn from Rs. 25,000 – Rs. 30,000 in both Wadh (34) and Bela (45). This is followed by persons who earn from Rs. 20,001 – Rs. 25,000 in both Wadh (34) and Bela (45). Also there are more persons earning from Rs. 15,001 – Rs. 20,000 in both Wadh (22) and Bela (18) when compared to those that earn from Rs. 10,000 – Rs. 15,000 in both locations (15 for Wadh residents and 12 for Bela residents).

Table 2. Distribution of Respondents by Socioeconomic Qualities

Variable	Categories	Tehsil Wadh		Tehsil Bela	
		N	%	N	%
Occupation	Farming	22	22	8	8
	Livestock	58	58	54	54
	Livestock and farming	16	16	25	25
	Trading	2	2	12	12
	Government	2	2	1	1
	Total	100	100	100	100
Farming experience	05 – 10	12	12	20	20
	11 – 20	34	34	34	34
	21 – 30	46	46	42	42
	31 – 40	14	14	4	4
	Total	100	100	100	100
Income Source	Livestock farming	40	40	35	35
	Livestock and crop farming	45	45	40	40
	Livestock and services	10	10	15	15
	Livestock, crops and services	5	5	10	10
	Total	100	100	100	100
Livestock Income	10000-15000	15	15	12	12
	15001-20000	22	22	18	18
	20001-25000	29	29	25	25
	25000-30000	34	34	45	45
	Total	100	100	100	100

Table 3 documents the perception of the respondents on how much livestock income fulfils their domestic needs. According to the results, there is consensus among Wadh (55) and Bela (47) respondents that livestock income fulfils their domestic needs to a great extent. However, more respondents in Wadh (16) than in Bela (13) are of the view that livestock income fulfils their domestic needs to too extent. On the other hand, more respondent in Bela (17) than in Wadh (14) believed that livestock income fulfils their domestic needs to an average extent. In the same vein, there are more respondents in Bela who suggest that livestock income fulfils their domestic needs to some extent (11) than in Wadh (8). This pattern is also true among persons who believe livestock in come fulfils their domestic needs to a little extent (9 persons in Bela and 5 persons in Wadh). Despite the overwhelming consensus that livestock income helps with domestic needs, some respondents (2 in Wadh and 3 in Bela) hold the opinion that livestock income does not fulfil their domestic needs at all.

Table 3. Distribution of Respondents According to How Livestock Income Fulfils their Domestic Need

Response	Tehsil Wadh		Tehsil Bela	
	N	%	N	%
To a little extent	5	5	9	9
To some extent	8	8	11	11
To an average extent	14	14	17	17
To greater extent	55	55	47	47
To much extent	16	16	13	13
Not at all	2	2	3	3
Total N	100	100	100	100

In Table 4, the opinion of the respondents on whether livestock farming affects several socioeconomic aspects of their lives has been reported. A majority of the respondents are neutral on whether livestock farming improves their lives in any of the socioeconomic areas. However, those who agree about the importance of livestock farming to the specified areas of their lives are more than those who either strongly disagree or disagree as can be seen from Table 4.

Table 4. Distribution of Respondents by Whether Livestock Farming Improves their Lives in Specific Socioeconomic Areas.

Socio-economic aspects	Strongly Disagree		Disagree		Neutral		Agree	
	Wadh	Bela	Wadh	Bela	Wadh	Bela	Wadh	Bela
Living standard	3	2	7	5	60	70	18	15
Education of the children	2	1	5	3	72	80	12	10
Empowerment	4	3	9	7	55	70	15	13
Family income	2	1	4	2	60	80	16	14
Health	2	1	4	2	70	80	12	10
Food requirements	3	2	5	3	65	77	14	12
To keep himself busy	2	1	3	2	75	80	12	10

Correlation Analysis

Correlation analysis was performed to determine the correlation among the variables. Table 5 shows the correlation results for Wadh. According to the result the livestock variables have a positive and significant correlation with the dependent. Owning a cow is however, more strongly correlated with family income than the other variable which indicates that cow may be a very important livestock in Wadh. Camel ownership is also more correlated with the dependent variable when compared to sheep, goat, and chicken ownership. Among the independent variables, the correlation is mostly low and negative but positive correlation can be observed between cow and chicken ownership and between cow and camel ownership. The same can be said for the correlation between goat and camel, goat and chicken, and camel and chicken.

Table 5. Result of Correlation test of variables of tehsil Wadh

	Family In- come	Cow	Sheep	Goat	Chicken	Camel
Family Income	1					
Cow	0.31995	1				
Sheep	0.05469	-0.1887	1			
Goat	0.01374	-0.2853	-0.3697	1		
Chicken	0.01496	0.04322	-0.2566	0.31103	1	
Camel	0.29885	0.35393	-0.1862	0.22796	0.241	1

In Table 6, correlation between the variables for Bela is presented. A similar correlation pattern can be observed for Bela as with Wadh. Correlation with family income is highest for cow ownership followed by camel ownership. Again, this suggests that both livestock are very important to household wellbeing in Bela. Contrary to the result for Wadh, there is negative correlation between goat ownership and family income in Bela. Also different from Wadh is the almost completely negative correlation between the livestock considered with the exception of the correlation between cow and chicken and sheep and camel. In other words, cow and chicken and sheep and camel may be complements while the other livestock combinations may be considered substitutes to households in Bela.

Table 6. Result of Correlation test of variables of tehsil Bela

	Family In- come	Cow	Sheep	Goat	Chicken	Camel
Family In- come	1					
Cow	0.32336	1				
Sheep	0.05842	-0.1236	1			
Goat	-0.1221	-0.1161	-0.0372	1		
Chicken	0.07115	0.17768	-0.1244	-0.2323	1	
Camel	0.08844	-0.1092	0.311	-0.0169	-0.1373	1

Regression Analysis

In addition to correlation analysis, regression analyses were also performed in line with the objective for Wadh and Bela. Table 7 shows the regression result for Wadh region. As can be seen,

all the livestock have a significant impact on household income looking at the p-values of the coefficients. However, the impact of chicken on household income is negative, contrary to expectation. From the coefficient, it can be said that owning a chicken decreases household income by around 0.3%. The effect of camel is largest on household income followed by the effect of cow ownership. The cow coefficient shows that owning a cow increases household income by around 3% while the camel coefficient shows that owning a camel increases household income by 105.5%. In the same vein, owning a sheep or a goat would increase the income of an average household in Wadh by 0.7% and 0.5% respectively. Thus, it can be seen again that cow and camel are very important livestock among Wadh households.

Table 7. Regression Result for Wadh

	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	4.39599	0.06138	71.6156	8.19692E-	4.27412
Cow	0.03251	0.0112	2.90242	0.00461	0.01027
Sheep	0.00758	0.0041	1.84837	0.06769	-0.0006
Goat	0.00593	0.00465	1.27498	0.20546	-0.0033
Chicken	-0.0038	0.00917	-0.4168	0.67776	-0.022
Camel	0.15546	0.0875	1.77673	0.07885	-0.0183

In Table 8, the regression result for the Bela region has been reported. The result is similar with the Wadh model but there are some differences. For instance, owning a goat is found to have a negative impact on household income contrary to expectation. Specifically, owning a goat would decrease household income by 0.1 percent on average. As with Wadh, camel has the highest impact followed by cow. According to the camel coefficient, owning a camel increases household income by 1.5% approximately while owning a cow increases it by 1.4% approximately. Concerning sheep, it can be seen that owning a sheep increase household income by around 0.3%. Also, owning a chicken has the least impact with the result suggesting an 0.06% increase in household income when a chicken is owned.

Table 8. Regression Result for Bela

	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	4.5441	0.04523	100.473	1.87E-09	4.4543
Cow	0.01384	0.00413	3.35155	0.00116	0.00564
Sheep	0.00248	0.00384	0.64642	0.51958	-0.0051
Goat	-0.0011	0.00149	-0.757	0.45095	-0.0041
Chicken	0.0006	0.00347	0.17244	0.86346	-0.0063
Camel	0.01495	0.01449	1.03163	0.30489	-0.0138

Discussion and Conclusion

Today, with ever-increasing needs, the desire to earn more money is growing. Capital formation is an important concept in improving and elevating any household or business activity for development. Among asset poor smallholders' capital does make a difference a ton as they have inflexible reliance on promoting. According to the data, all smallholders used livestock animals as a

source of income, either completely or partially. The majority of smallholders declared livestock animals to be a full-fledged source of income, while a few farmers frequently utilized livestock animals as a source of income. These smallholders were also involved in various activities such as yield cultivation, farming, and private business. Draft, transportation, and milk are the most important income sources generated by livestock animals (Campbell et al., 2002). The most important reason for raising livestock animals is to gain income from employment, as the income generated aids in the provision of jobs (Butler et al., 2007).

According to the findings of the study, livestock animal production is critical to advancement, particularly in rural areas. Farmers claimed that animals were their primary source of income, which helped them in their inspirations. Most farmers earned between Rs.25000 and Rs.30000 per month. This remuneration was used to pay for training, health care, food, and other necessities. Livestock animals appeared to play a role in achieving the Millennium Development Goals (MDGs) by improving strength and reducing poverty. Regardless, the financial state of farmers was found to be pitiful and should be improved by increasing their multipurpose limits. According to the findings of this investigation, livestock animals are an important part of Balochistan's culture and economy.

The study's significant finding demonstrates that Balochistan's development is only possible if significant investment is made in the livestock sector, particularly in rural areas. Furthermore, livestock animals appear to play an important role in achieving a stable living and a significant factor in reducing poverty. Furthermore, for farmers who own livestock, domestic animals are one of the primary sources of income that support employment and other necessities of life in Balochistan's provincial regions. Generally, domestic animal income is used for education, health, and other sustenance requirements, and so on. Farmers benefited from local and commercial livestock animal production by selling their produce (milk, ghee, and dahi) and displaying their animals.

The majority of household heads understood the role of animals in improving welfare through income. Furthermore, 10% of respondents believe that animal husbandry has no effect on household needs satisfaction. On the other hand, 33.3 percent of farmers reported that livestock significantly improved household ability to meet domestic needs. Livestock animal promotion is recognized as a legitimate business that pays a living wage. As demand rises, so will supply. To meet rising demand, a diverse range of resources is required. Similarly, increasing animal yield is seen as one of the reasonable ways to improve rural household welfare (Khushk and Hisbani, 2004).

Animal farming is beneficial for nutrient requirements/vocation, family pay, strengthening, family wellbeing, and education, as well as livestock animal redesigning, according to the findings. Furthermore, as we all know, livestock animals not only amuse the general public but also play an important role in female empowerment in farmland. Based on the study's findings, it is critical that administration pay special attention to livestock animals in the Balochistan region in order to improve employment and inspire people's expectations for daily comforts.

Increased openness and accessibility of technology for livestock production, such as manual semen injection, can improve the benefits. Producers of livestock animals should be given the opportunity to receive training on animal nutrition, animal marketing, and data acquisition from livestock animal facilitators. Livestock extension administrations should be redesigned to assist livestock animal managers, and facilitators should be outfitted with the most recent data corresponding advances in ICT for data dissemination. There is no doubt that livestock provide food and income to a large portion of the population; however, farmers' financial situations continue to be poor. As a result, farmers are advised to use planned impregnation and other fundamental cutting-edge advances to increase flexibility and productivity. Furthermore, farmers will benefit greatly from learning more about creature farming.

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