



LIVESTOCK DEVELOPMENT AND FOOD SECURITY ASPECTS FOR POVERTY ALLEVIATION IN BALOCHISTAN

Dr. Faqir Muhammad Baloch
Senior Veterinary Officer
Livestock and Dairy Development Department
Quetta - Pakistan
faqirbaloch71@gmail.com

Dr. Karim Jan Baloch
Senior Veterinary Officer
Livestock and Dairy Development Department
Kech, Turbat - Pakistan
drkarimjan1@yahoo.com

Dr. Shahida Habib Alizai
Assistant Professor
Gender Development Studies Department
University of Balochistan
Quetta - Pakistan
drshahidahabibalizai@gmail.com

Abstract

In order to measure the food security aspects for poverty alleviation dynamics this study was carried out. The perception of livestock farmers was recorded based on a 5-point Likert scale. Descriptive research was selected. A three districts such as Mastung, Kalat and Loralai were selected. Sample size of this study consisted of 300 hundred livestock farmers by using the Fitz-Gibbon and Morris (1987) table. Excel tally sheets and SPSS were used for information analysis. Analysis of variance (LSD, Post Hoc Tests) based on 0.01 alpha level was used. Results show that the majority (67%) of livestock farmers were between the age of 31 to 50 years. While, 23 and 14% of the livestock farmers held matriculation and intermediate educational level respectively. Statistical significant differences were observed in 3 out of 5 items about food security and poverty alleviation items. Based on achieved results following recommendations put forward. The Balochistan government should promote market-based production in the livestock sector in order to



achieve the food security goals for poverty reduction in poverty stricken areas. Livestock farmers should be facilitated by the government agency in providing them credit packages so as to improve their food security aspects for the poverty reduction angle for sustainable livestock systems.

Keywords: livestock sector, food security, poverty alleviation, Balochistan

1.1 Introduction

In Asia, livestock is the imperative segment for food security and has fulfilled the demand of foodstuff for the general public as well as accelerating their livelihood options over the last 30 years (Delgado et al., 1999). Due to the rapid urbanization process and hasty economic growth, the livestock sector and its significance are increasing. Due to the effectiveness of the livestock sector, the general population dietary pattern and food security diversification are enhanced as a result more food items like dairy products and red meat consumption pattern are increased (Delgado et al., 1999; FAO, 2002; Steinfeld et al., 2006).

As compared to advanced countries, in poor countries the per-capita meat consumption pattern is thrice figured as a result the red meat production factors red meat consumption pattern are swelling in more modest ways. These facts and figures show that 80% of red meat production around the world are enhanced and projected over the last 25 years in developing countries as compared to advanced countries (FAO, 2006b).

However, on the other hand, live domestic animals demand, red meat production and their consumption pattern are still enhanced mostly in SouthEast Asia nations like China, Laos, Vietnam and Thailand (Stur et al., 2002; and Quirke et al., 2003).

In rural areas of Pakistan, the livestock farmers conventionally keep the small even larger numbers of livestock for dairy products and red meat consumption. However, in this regard the major obstacles of livestock production like lack of feed available for animals, poor nutrition access, livestock diseases, harsh climate and arid season consequently high morbidity as well as mortality rates are common phenomena and animals did not gain the weight. Therefore, it is necessary to uplift livestock for poverty alleviation in rural areas and secure food for the general people (FAO, 2005).

1.2 Role of Livestock Sector for Poverty Alleviation



As compared to other revenue-generated sectors, the livestock sector is playing a major role for development and grooming of poor rural masses socio-economic conditions in least developed countries (Delgado et al., 1999; and FAO, 2002). Mostly in rural areas in developing countries the livestock sector delivers a key role for the amount of annual cash revenue within terms of animal's sale for household units. In this regard the livestock sector is the key role for the revenue generation process and major sources of income for rural people (LID, 1999; and Steinfield et al., 2006).

However, the livestock sector plays a major role for rural development and poverty alleviation. Beside the livestock sector also accelerate the safety net in those areas whereby the major or cash crops fail (Dolberg, 2001). In this context, the international agencies and R&D sections promoted the packages and programs for poverty reduction at a considerable rate so as to increase the livelihood options and sources of income promotion for the rural masses (LID, 1999; and Scoones & Wolmer, 2006).

On the other hand, ineffective technologies, poorer delivery systems and lack of planning may cause a various snag in qualitative aspects for promotion of livestock sectors regarding poverty alleviation schemes. But pro-poverty reduction programs may increase the livestock capacity for beneficial aspects (LID, 1999; and Christoplos & Farrington, 2004). Furthermore, for the purposes of livestock sector restructuring and empowering related with poverty alleviation within terms of secure food security aspect, it was indispensable that the livestock sector should be arranged on scientific line and encourage the state- of arts technology adaptability at grass root level (Dolberg, 2001; and Whittaker, 2006).

Restricted manpower and limited labor resources the livestock farmers may face various problems like inherent disease, low output, low production and so forth. Due to the poor livestock program, lack of capital, lack of labor and lack of credits in the uplands of Asia may affect this sector severely as a results negative impact over on socio-economic conditions of the rural masses especial in health and education sectors (Nath et al., 2005; Alexander et al., 2006; and Whittaker, 2006).

A various livestock programs and packages (pro-poor rural development initiatives) by both public and NGOs sectors were designed so as to developed the socio-economic condition of the rural people mostly programs and packages were domed to failed due to the top-down approaches and managerial styles as a results widen gap between livelihood options and socio-economic condition of the rural masses. In this regard poverty remains constant in rural Asia (Christoplos & Farrington, 2004; Friday et al., 2006; and Van den Ban & Samantra, 2006).



1.3 Livestock Sector in Asia

In the Asia context, the livestock sector has dynamic potential. But unfortunately the fruits of these efforts were not harvested as yet as a result the benefits of the livestock sector did not equally distribute properly (FAO, 2002; and Steinfield et al., 2006). The meat consumption pattern in China has increased at greater extent over the last decade for example the beef consumption pattern increased at 16% poultry increased at 14% as well as pork increased at 6%. In this regard China is the 2nd largest beef producer and poultry producer country that increased their beef production (Quirke et al., 2003).

In the case of Lao, Thailand and Vietnam, the meat consumption pattern is a steady increase in per capita income. However, in this regard the beef consumption pattern is comparatively squat in these nations that estimate modest increases (Quirke et al., 2003). Livestock sector direction and modus operandi are comparatively different and comprise a mix by its nature such as capital-intensive or the commercial operations aspects, diverse labor intensive features in both rural and urban areas. In these areas the number of livestock farmers has less than 5 buffalo, cattle and domestic or farm animals (FAO, 2006b).

Then again, livestock sector fabrication has gradually and slowly moved from rustic localities towards peri-urban localities where at a considerable rate to capture the market of dairy products. Furthermore, poultry production as well as demands are elevated due to the lowering prices system. Based on prediction it was observed that in developing countries that livestock production may enhanced (Delgado et al., 1999; Quirke et al., 2003; Steinfield et al., 2006; FAO, 2006a; FAO, 2006b; and FAO, 2006c)

On the other hand, trade liberalization around the world is likely to affect the small livestock holders frequently. Alternatively, facts and figures show that trade liberalization may increase the actual labor-wages (Quirke et al., 2003; and Steinfield et al., 2006). Eventually, the volume and dimension of livestock fabrication structures to respond or to deviations the world costs, or costs of production within the context of Asian livestock sector.

1.4 Meat Production for Poverty Reduction and food Security in Balochistan

Balochistan province is well known for sheep rearing and goat production. These domestic animals are also used for dietary purposes at province level. Small livestock farmers were also increased their income for selling the domestic animals so as to eliminate their poverty and secured his/her food security aspect. In this regard at



provincial government level these small livestock farmers did not facilitate which indicates that the lack of policy implication a grass root level will exist. Therefore, it is necessary to see or to examine the policies formulation so as to exploit the existing potential and their benefits regarding meat production direction at province level.

At Balochistan level a numerous potential is existing due to its unique topographical location, vast pasture areas, lease rangeland and the like. In Balochistan the production for livestock and highly potential area made the province more beneficial for livestock nurturing or feeding livestock. At province level the entire livestock population is estimated at around 20 million, which is amazing and also higher than % carrying capacity 6 to 7 times respectively (Balochistan Development Statistics, 2008-09).

1.5 Significance of Study

Imperative of livestock sector, food security aspects and poverty reduction dynamics are the interrelated terminology. This study is not only helpful for the diverse stakeholders who are working for the betterment of the livestock sector but also imperative for the livestock beneficiaries regarding processing and production of livestock.

1.6 Text Rationale

Livestock sector at Balochistan level has unique features due to its distinguished topographies. However, the livestock promotion in this regard is completely related with the production of livestock. The livestock sector did not increase the income of the rural people but was also fruitful for reducing the poverty in Balochistan. In this regard the livestock sector is the major poverty alleviating tool in this region. Majority of the rural people's livelihood options depend on the livestock sector. Despite these facts and figures the livelihood option of the rural masses did not improve as a result the socio-economic condition of the people are poor. Therefore, this study was conducted so that to measure the livestock development and food security aspects for poverty alleviation in selected district of Balochistan

1.7 Objectives of Study

Study objectives were outlined as follows;

1. To record the demo information of livestock farmers in the study area.
2. To assess the livestock sector for poverty reduction and food security dynamics in Balochistan region.
3. To suggest the policy measures for addressing the poverty reduction and food security dynamics at national level.



1.8 Methodology

In order to determine the livestock development for food security aspects and poverty alleviation in Balochistan this research was carried out. By nature, this study was a descriptive research because in this research the livestock respondents and their actualities were measured based on current condition and accurate facts (Gay & Mills, 2006). Sample survey was used because the sample survey was most appropriate in this context (Sekaran, 1992; and Babbie, 2004). Based on perceptual data the closed-ended questions were applied by using the semi-structured questionnaires. Sample size of this study consisted of 300 hundred livestock farmers. In this context, the sample distribution was given as (Mastung district+100 livestock farmers), (Kalat district+100 livestock farmers) and (Loralai district +100 livestock farmers=300) by using the random sampling techniques. Selecting sample sizes and table of Fitz-Gibbon and Morris (1987) was used in this research. Face to face interaction technique was applied to capture the actualities of livestock farmers. Thus the raw data was gathered at field level and analyzed by Excel tally sheet then SPSS. Analysis of variance (LSD, Post Hoc Tests) was used at 0.01 level (Gay & Mills, 2006).

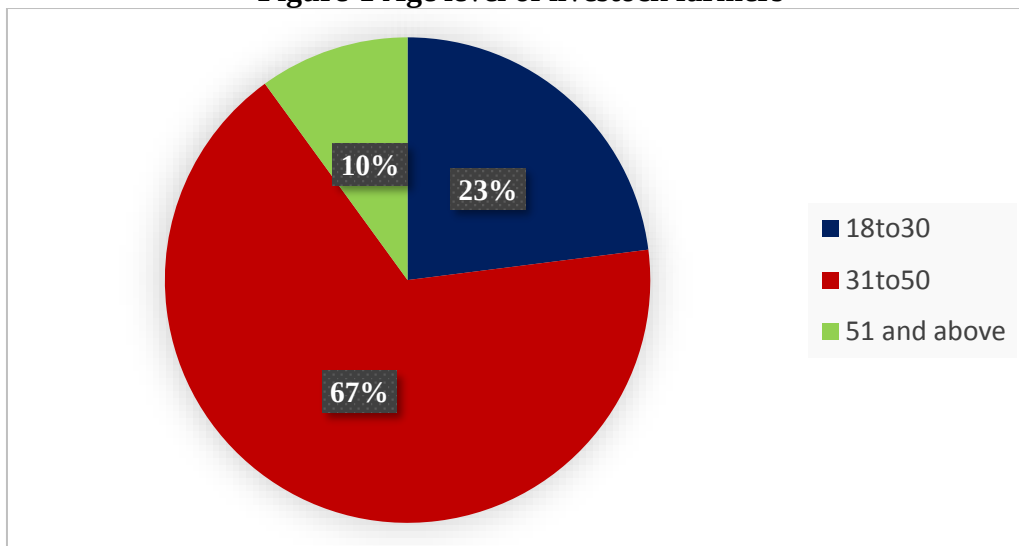
1.9 Results and finding

1.9.1 Socio-economic Attributions

Socio-economic attributions are the imperative feature in this study, because Socio-economic attributions play the vital role. In this regard this research was conducted at field level so that to measure the perception of the livestock farmers and their actualities.

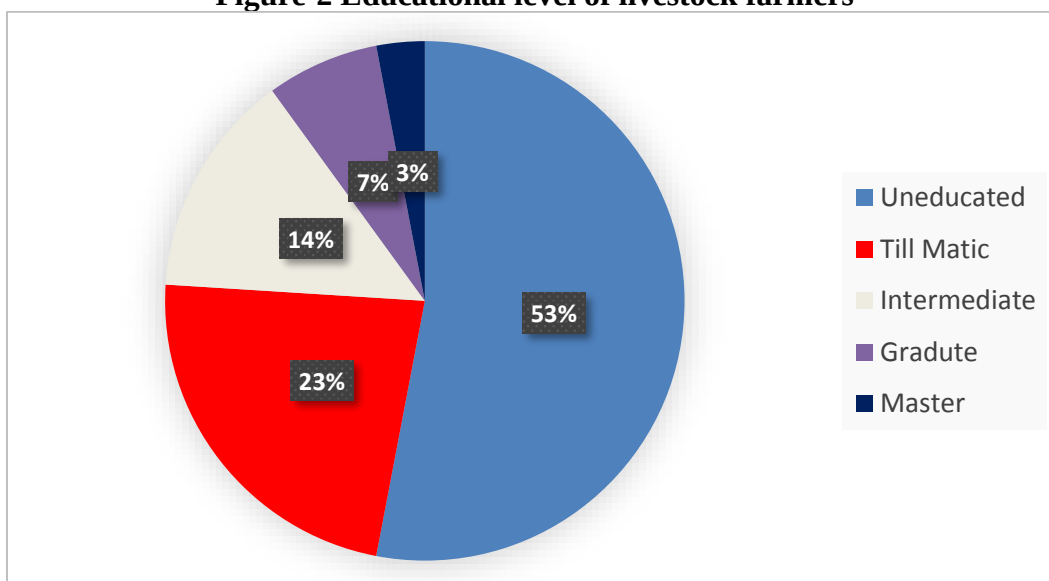


Figure-1 Age level of livestock farmers



Age is the vital socio-economic attribution that reflects the positive impact as shown in figure-1. Majority (67%) of livestock farmers were between the age of 31 to 50 years followed by most 23% of livestock farmers were between the age of 18 to 30 years respectively.

Figure-2 Educational level of livestock farmers





The educational status of the livestock respondents was measured by using the Excel tally sheet as shown in figure-2. More than half (53%) of the livestock farmers were uneducated. While, 23 and 14% of the livestock farmers held matriculation and intermediate educational level respectively.

Table-1: Perceived score of livestock farmers as district-wise

Variables	Mastung		Kalat		Loralai		Mean Square	f-value	Sig*
	MS	SD	MS	SD	MS	SD			
Socio-economic accelerations	3.760	1.0062	3.230	.8022	3.030	.7028	.717	19.855	.000**
Increase the livelihood options	3.540	1.0485	3.940	.5089	3.220	1.4183	1.123	11.584	.000**
Uses the livestock sector for poverty alleviation	3.270	1.1178	3.900	.8102	3.420	.7808	.839	12.914	.000**
Uses the livestock sector for food security	3.160	1.0417	3.450	.8087	3.310	1.2528	1.103	1.907	.150 ^{NTS}
Uses the livestock sector for income general tool	3.000	1.2633	3.040	.4696	3.360	.9694	.919	4.237	.150 ^{NTS}

SD = Standard deviation * The mean difference is significant at the 0.01 level.

The livestock farmers were asked about the food security and poverty alleviation aspects as shown in table-1. In this regard, analysis of variance test was used at 0.01 level so as to compare the mean score as group-wise among diverse livestock promotion items. However, in this regard the high statistically differences among items were observed at ($p < .01$) by using LSD i.e., socio-economic accelerations ($f\text{-value} = 19.855$, $p < .001$), increase the livelihood options ($f\text{-value} = 11.584$, $p < .001$), and uses the livestock sector for poverty alleviation ($f\text{-value} = 12.914$, $p < .001$) respectively. While, uses the livestock sector for food security ($f\text{-value} = 1.907$, $p < .001$) and uses the livestock sector for income general tool ($f\text{-value} = 4.237$, $p < .001$) were non-significant based on $p < .001$ probability level. In this regard statistical significant differences were observed in 3 out of 5 items about food security and poverty alleviation items.

1.10 Conclusions



Livestock sector is the backbone of Balochistan economy. But livestock farmer's socio-economic conditions are not improving as compared to other provinces of Pakistan. So, in this regard solid policies and firmed strategies are needed so as to improve poor livestock farmer's income conditions. On the other hand, the livestock sector cannot be effective due to inadequate policy. It is therefore to pay attention toward this sector for food security and poverty alleviation in Balochistan especially in poverty stricken areas. Based on achieved results following recommendations put forward. The Balochistan government should promote market-based production in the livestock sector in order to achieve the food security goals for poverty reduction in poverty stricken areas. Livestock farmers should be facilitated by the government agency in providing them credit packages so as to improve their food security aspects for the poverty reduction angle for sustainable livestock systems.



References

- Alexander, K., Millar, J., Lipscombe, N. and Spennemann, D. (2006). Changes to agricultural production and livelihoods in Xieng Ngeun district, Luang Prabang, Lao PDR. In Proceedings of the International Symposium Towards Sustainable Livelihoods and Ecosystems in Mountainous Regions Chiang Mai, Thailand. On WWW at <http://www.mountainsymposium2006.net.ms>. Accessed 10.02.07.
- Babbie, E. & Mouton, J. (2004). The practice of social research. Cape Town: Oxford University Press.
- Balochistan Development Statistics, (2008-09). Bureau of Statistics, Planning and Development Department Quetta Pakistan.
- Christoplos, I. and Farrington, J. (2004). Poverty, Vulnerability and Agricultural Extension. Policy Reforms in a Globalizing World. New Delhi: Oxford University Press.
- Delgado, C., Rosegrant, M., Steinfeld, H., Ehui, S. and Courbois, C. (1999). Livestock to 2020. The Next Food Revolution. Food, Agriculture and the Environment Discussion Paper 28. Washington: International Food Policy Research Institute.
- Dolberg, F. (2001). A livestock development approach that contributes to poverty alleviation and widespread improvement of nutrition among the poor. Livestock Research for Rural Development 13 (5). On WWW at <http://www.cipav.org.co/lrrd/lrrd13/5>. Accessed 06.09.07.
- FAO, (2005). Livestock Sector Brief. Lao Peoples Democratic Republic. FAO, Rome, Italy. On WWW at http://www.fao.org/ag/againinfo/resources/en/publications/sector_brief/lsb_LAO.pdf. Accessed 8.11.06.
- FAO, (2002). Some Issues Associated with the Livestock Industries of the Asia-Pacific Region. RAP publication no. 2002/06. On WWW at <http://www.fao.org/DOCREP/005/AC448E/ac448e02.htm#bm2>. Accessed 8.11.06.
- FAO, (2002). Some Issues Associated with the Livestock Industries of the Asia-Pacific Region. RAP publication no. 2002/06. On WWW at



- <http://www.fao.org/DOCREP/005/AC448E/ac448e02.htm#bm2>. Accessed 8.11.06.
- FAO, (2006a). FAO Statistical Yearbook. Country profiles. Lao People's Democratic Republic. On WWW at http://www.fao.org/statistics/yearbook/vol_1_2/pdf/Lao-Peoples-Dem-Republic.pdf. Accessed 8.11.06.
- FAO, (2006b). Responding to the 'Livestock Revolution' – the case for livestock public policies. Livestock Policy Brief 01. On WWW at http://www.fao.org/ag/againinfo/resources/en/publications/sector_brief/lsb_LAO.pdf. Accessed 8.11.06.
- FAO, (2006c). Pollution from industrialized livestock production. Livestock Policy Brief 02. On WWW at http://www.fao.org/ag/againinfo/resources/en/publications/sector_brief/lsb_LAO.pdf. Accessed 8.11.06.
- Fitzgibbon, C. T., & Morris, L. L. (1987). *How to Design a Program Evaluation?* Newbury Park, CA: Sage.
- Friday, J.B., McArthur, H.J. and Watson, L.A. (2006). Using participatory rural appraisal and participatory research and extension in a post-independence environment: A case from East Timor. *International Journal of Agricultural Sustainability* 4 (2):108–118.
- Gay, L. R., & Mills G. E. (2006). *Educational Research: Competencies for Analysis and Applications* 5th ed. Upper Saddle River, N.J.: Merrill/Prentice Hall.
- LID, (1999). *Livestock in Development, 1999. Livestock in Poverty-Focused Development*. Crewkerne: Livestock in Development.
- Nath, T.K., Inoue, M. and Chakma, S. (2005). Shifting cultivation (jhum) in the Chittagong Hill Tracts, Bangladesh: Examining its sustainability, rural livelihood and policy implications. *International Journal of Agricultural Sustainability* 3 (2): 130–142.
- Quirke, D., Harding, M., Vincent, D. and Garrett, D. (2003). *Effects of globalisation and economic development on the Asian livestock sector*. ACIAR Monograph Series 97e. Canberra: Australian Centre for International Agricultural Research.



- Scoones, I. and Wolmer, W. (2006). Livestock, Disease, Trade and Markets: Policy choices for the Livestock Sector in Africa. IDS Working Paper 269. Institute of Development Studies, UK.
- Sekaran, U. (1992). Research methods for business: A skill-building approach (2nd ed.) (pp. 114–147). New York: John Wiley & Sons, Chapter 5.
- Steinfeld, H., Wassenaar, T. and Jutzi, S. (2006). Livestock production systems in developing countries: status, drivers and trends. *Revue scientifique et technique – office international des épizooties* 25 (2): 505–516.
- Stur, W., Gray, D. and Bastin, G. (2002). Review of the Livestock Sector in the Lao People's Democratic Republic. Prepared for the Asian Development Bank. International Livestock Research Institute, Manila, Philippines.
- Van den Ban, A.W. and Samantra, R.K. (eds) (2006). Introduction. In *Changing Roles of Agricultural Extension in Asian Nations* (pp. 1–20). Delhi: B.R. Publishing Corporation.
- Whittaker, S. (2006). The farmer factor in agricultural development: A study of livelihoods, shifting cultivation and change in the Lao PDR. Master's thesis, Massey University, New Zealand.