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# LIVESTOCK SECTOR REPORT



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**Ministry of Industries & Production**

**Government of Pakistan**

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## 1 - DISCLAIMER

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## 2 - Description of Sector

### 2.1 Livestock Sector Brief

Over the years, the livestock sector has emerged as a leading sub-sector of the agriculture sector in Pakistan. Livestock sector is an integral part of the rural economy contributing 33 percent in Agricultural GDP of the province while its contribution to total GDP of the Province is 8 % (2010)<sup>1</sup>. In spite of difficult conditions for the livestock industry, it occupies a pivotal place in the economy of Balochistan due to being the mainstay of more than 75% <sup>2</sup> of the people inhabiting the countryside in the relative absence of other means of subsistence.

The role of livestock in the rural economy is critical, with approximately 35 million people located in rural areas engaged in raising livestock, which generates approximately 30-40% of their income<sup>1</sup>

The livestock resources are cattle, buffaloes, goats, sheep, camels, pack animals and poultry. As per Livestock Census 2006, the national population of cattle, buffaloes, goats, and sheep were 29.5, 27.3, 53.7 and 26.4 million, respectively. The percentage share of Balochistan in the national pool of these livestock species was 7.62, 1.17, 21.90 and 48.34 percent for cattle, buffaloes, goats, and sheep, respectively. The contribution of small ruminants of the province is nearly 35.1 percent of its national population. This significantly higher number of small ruminants is mainly due to the suitability for biophysical environment and availability of vast grazing lands in the province.

While projected population of cattle, buffaloes, goats and sheep in 2013 were 3.57, 0.62, 14.09, 14.50, and 0.42 million, respectively. Significant portion of sheep population i.e. 12, 804,217 (48 %) of the country Goats- 11,784,711 (22 %) of the country.

<b>Animal species</b>	<b>Livestock Census Pakistan</b>	<b>2006 census Balochistan Actual</b>	<b>Percentage of Livestock Balochistan</b>	<b>2013 census Balochistan (Projected)</b>	<b>Growth %</b>
<b>Sheep</b>	<b>26.49</b>	<b>12.80</b>	<b>48 %</b>	<b>14.50</b>	<b>1.8%</b>
<b>Goat</b>	<b>53.79</b>	<b>11.78</b>	<b>22 %</b>	<b>14.09</b>	<b>2.6%</b>
<b>Cattle</b>	<b>29.56</b>	<b>2.25</b>	<b>8 %</b>	<b>3.57</b>	<b>6.8%</b>
<b>Buffalos</b>	<b>27.33</b>	<b>0.320</b>	<b>1 %</b>	<b>0.62</b>	<b>9.9%</b>
<b>Camel</b>	<b>0.92</b>	<b>0.380</b>	<b>41 %</b>	<b>0.42</b>	<b>1.5%</b>
<b>Total</b>	<b>138.09</b>	<b>27.54</b>	<b>20.01</b>	<b>33.20</b>	<b>11.27</b>

Due to recent drought particularly in Balochistan province livestock population has dropped considerably. The province has

<sup>1,2</sup> Balochistan needs assessment: development issues and prospects working paper (2013).

- 48% of Sheep Population of the Country
- 22% of Goat population of the Country.
- 41% of Camel population of the Country

## **2.2 Major Breeds of Livestock**

The major cattle breeds found in the province are Bhagnari, Red Sindhi and Lohani. Bhagnari breed of Balochistan are considered best draught type animals throughout the country and are always in demand for pulling heavy loads and tilling hardest soils in Sind and Punjab provinces. Red Sindhi breed of cattle found in Lasbela is also one of the best milch breed suitable for tropical conditions and has been exported to many countries for crossbreeding to over-come nutritional, climatic and tropical disease problems. There are a considerable number of cross breed fresian cows in Pashin and adjoining districts as compare to cows the production of buffalo is much lower in the province.

The province is famous for possessing few carpet and mutton quality sheep capable to thrive well under harsh climate and at low level of nutrition namely Bibrik (Beevragh), Harnai, Balochi and Rakhshani. other breeds include Kakri, and Mengali. Average live weight of adult animals of these breeds varies from 25-40 kg. Goat breeds in the province include Pahari, Kajli, Khurasani and Lehri.

Balochi sheep are raised mainly for wool and milk production. The Bibrik breed of sheep is raised for mutton and wool. The Harnai breed of beep is for wool production and Rakhshani breed of sheep is raised for wool and mutton. Kamori and Tapri breeds of goats are mainly raised for milk and mutton.

## **2.3 Geographical Location**

Different parts of Balochistan are famous for different species of livestock. Northern areas and central areas of the province are famous for Sheep production. The major sheep production districts in northern Balochistan includes Killa Saifullah, Ziarat, Loralai, Zhob, Barkhan and MusaKhel Districts. In Central Balochistan Sheep is produced in Sibi, Kalat, Mastung and Khuzdar Districts.

Goats are mostly raised in the southern parts of the province while cattle are raised in Sibi, Jaffarabad, Naseerabad and Bolan districts. Similarly Lasbella district is most suitable for cattle and the area contains Red Sindhi cattle. Buffalos are mostly raised in Peris urban farms in or near the major cities. Internal and cross border movement takes place at well-defined periods. Pishin and kuchlak areas also contain a large population of cross breed Friesian cows.

# **3 - Analysis of Business Operations**

## **3.1 Production Processes**

The major production system in the province is transhumant and Nomadic while a small amount of livestock is raised in villages. There is little or no integration with crops in the Transhumant systems. Being a range based livestock production system the nomads and pastoralists migrate according to seasonal availability of feed for their flocks, the movement takes place from summer and winter quarters adopting fixed migratory routes. Twice a year, in spring and autumn, groups of nomads and transhumant livestock owners follow precise itineraries to and from highlands of Balochistan. Two such itineraries can be distinguished as under:-

- i) The north-south migratory routes, usually followed by Pushtun nomads and transhumants.
- ii) The east-west migratory routes, followed by Brahvi transhumants

### **3.2 Technology**

One of the major issue facing small ruminants in Balochistan is low productivity per animal. Livestock production technologies need to be improved to increase the productivity of animals. A number of important technological developments are taking shape in the developed countries, particularly in genetics and reproduction, feeding, and animal health. In this respect new technologies or existing technologies need to be identified for improved feed and feed use, animal health, improvement in genetics, and better post harvest technologies.

Policy is required to facilitate the adoption of effective technologies by the poor farmers. The policies will have to address the issue of productivity while keeping in view the natural resource base. The objective should be transformation of current range based farms into semi intensive farming systems and in the long run focus on introducing specialized and commercial enterprises in rural areas.

### **3.3 Market Analysis**

Historically animals have not been marketed on a regular basis for income as a commercial endeavor but sold in times of need. Old females were to be sold in the spring to pay for supplies, and adult males in the fall for the production of LANDHI, dried mutton, a winter staple food. When purchases of clothing, tea, sugar, grain, animal feed, seed, fertilizer or other market items are necessary animals are sold to provide sufficient funds. However, around population centers i.e. big towns and cities, producers have started to consider animal commercial ventures and targets specific markets.

### **3.4 Wholesale Market Locations**

Sheep and goats belonging to nomadic and transhumant graziers of Balochi and Brahvi tribes are marketed, besides Quetta, in Sibi and Jacobabad. They come down from their summer pastures in the highlands of Quetta, Mastung, Nushki, Kalat and Khuzdar districts to spend the winter in the lower plains of Kachhi and Nasirabad. Graziers of the Bugti and Marri tribes also market their surplus animals next to the local markets in Jacobabad and Sibi, alongside flock owners from the Bolan, Sibi, Jaffarabad and Nasirabad districts.

Beside being slaughtered in the province a considerable number of animals are sent to other provinces for consumption. No direct export is taking place from the province.

Sheep and goats belonging to the sedentary and transhumant graziers of the Khetrani tribes of Barkhan, the Marri tribes of Kohlu agency and the Duki tehsil, the Pathan tribes of Musakhel district, and the Bugti tribes of Dera Bugti agency (Baker and Phailawag) are marketed in Rakhni (Barkhan district) a border check-post located on road to Punjab for further transport and consumption in various towns of Punjab.

### **3.5 Marketing Channels**

#### ***Producers***

Livestock producers are widely dispersed and only very rarely coordinate with each other. They sell their livestock principally at the village level. Since they sell small ruminants to meet urgent cash demand, the producers are not in a position to bargain very effectively.

In a few cases, producers attempt to time the sale of animals to take advantage of seasonal fluctuation, but, in general, the expected price is not a determinant of the decision to sell.

### ***Village Dealers***

Village dealers purchase animals from surrounding areas and sell them to wholesalers in town markets. They pay the animal transportation costs, feeding costs and their own transportation and food costs.

### ***Wholesalers and Commission Agents***

Wholesalers buy from village dealers in small towns and transport the livestock to Quetta and the major consumption centers in other provinces such as Karachi and Lahore. Wholesalers also sell livestock through commission agents in the consumption centers. These agents are considered as an essential link with the buyers, and undertake the bargaining and arrangements of livestock sales.

### ***Butchers***

Mutton, goat meat and beef are sold fresh and now even after refrigeration particularly in Quetta and other warmer areas, in small shops after 8-10 hours of slaughtering in traditional type slaughter houses which lack proper hygienic facilities. Little, if any, meat is carried over to the following day. Most of the gross income returns to butchers come from meat sales, but a substantial portion is also received from by-products such as skin, head, trotters, stomach, lung liver and casings etc.

### ***Consumers***

Non-graded meat is sold by the butchers in their shops where poor hygienic conditions do exist. The Government regulates consumer prices of essential commodities, one of which is meat, but does not guarantee minimum meat quality standards.

## **4 - Opportunities and Threats**

### **Opportunities**

1. Swift increases in consumption/demand of live stock products;
2. Increasing demand of byproducts, blood, skin, etc.;
3. Technological improvement in live stock production and processing in developed countries which can be replicated in the developing countries.

### **Threats**

1. Rise in the use of cereal based feeds for livestock which increases the costs of cereals for human consumption
2. The continuous drought in the past decade and increasing demand of livestock has put greater stress put on grazing resources
3. Environmental and human health related concerns of Peri urban dairy farms and poultry farms near Major cities.

## **5 - Potential Projects involving Small Ruminants**

### **5.1 Market premises:**

Livestock markets need to be established in a proper premises where facilities of stock water points, feed stores and quarters, veterinary aid facilities, weighing scales and other such amenities are made available though on nominal charges. Consequent upon introduction of new Local Government system, the Union, Tehsil and District Councils

can provide such facilities which would in turn bring good revenue to such local government institutions.

### **5.2 Slaughter Houses:**

There is a need for establishing proper slaughter houses in almost every town of the province where proper sanitary conditions including water supply can be maintained and consumers are provided good quality meat. Blood, offals, hides and skins, a good source of income to stabilize meat prices, are saved from colossal losses if proper sanitary conditions are ensured. This can also be assigned to local government institutions.

### **5.3 Wool processing:**

Small scale and village based societies should be established for processing of wool viz wool scouring, cording, dyeing and using it in local carpet and rug making and other handicrafts like bags etc. Small Industries Department is already operating a number of carpet making centers and as such this know-how is already available.

### **5.4 Tannery:**

Possibilities to set up tannery in the province can be explored as besides producing a sizable quantity of hides and skins locally, good quantity of hides and skins from Iran and Afghanistan is traded through Quetta which at the moment is purchased by tanneries of Karachi.

### **5.5 Sausage making:**

Sheep casings produced in Balochistan are considered to be the best for preparation of sausages and are exported in raw form to European countries. Any entrepreneur can avail the chance of pioneer industry with good prospects of foreign exports.

### **5.6 Bone Glue manufacturing plant‘**

Animal proteins are applicable for a wide range of applications. Hide glue and bone glue are well known but technical gelatin and fine ground protein are also the products. Bone glue is a natural protein product for technical application. The bones used for the production of this protein are derived from animals found fit for human consumption. The product is made from 100% bones.

On the average, fresh bones contain about 50% of mineral matter, mainly calcium and magnesium phosphates, about 12% each of moisture and fat, the remainder being other organic matter. The mineral matter reappears in commerce chiefly as artificial manure; the fat is employed in the candle, soap and glycerin industries, while the other organic matter supplies glue.

### **5.7 Fresh Milk making plant**

Fresh Milk making plant that produces goat and sheep milk has great potential in market.

### **5.8 Semi Intensive/Intensive Farming**

With the frequent droughts, lesser rains and over use of grass lands, the pastures are becoming unproductive day by day and hence extensive range grazing is becoming difficult and without profit. The alternative is that livestock owners having some fixed land base should be encouraged to undertake intensive / semi – intensive farming which in the beginning would be little expensive but with the current lucrative price structure of meat throughout the country coupled with its developing exports potentials, would prove profitable enterprise. With the switching over to intensive farming which would warrant stall/ supplementary feeding, non-conventional and economical feeding techniques and improved genetic material, the livestock farming can become a cost effective enterprise

with its downstream positive effects in the farming community. The country can thus also be benefited with increased productivity of animal protein.

Since nutrition is a serious limiting factor in the livestock industry of Balochistan with the result that many animals arrive at the market in less than optimal body condition with body weight on the lower end, there is a dire need to ensure feed availability round the year with proper protein contents for increasing livestock productivity rather than its numbers. Such a situation directs to adopt non-conventional feed preparation and feeding techniques like treatment of wheat/ rice straws and other crop residues with urea or ammonia, molasses bocks, silage making , concentrate mixtures with low cost formulae, feed lots, semi – intensive farming and ewe flushing etc. such techniques have already been tested and demonstrated to the farmers under different projects.

### **5.9 Establishment of Livestock Processing Zone in Balochistan**

Availability and production of livestock, specially Sheep and goats in Balochistan is the major strength and needed to be capitalized for the benefit of rural population by processing, value addition and by products production through public and private sector developmental initiatives, Moreover, demand of the livestock meat and by products is on the continuous rise for the past few decades in Pakistan as well in international markets. The meat by-products are broadly divided in three classes: edible, non-edible and pharmaceutical. The by-products are then transformed in a variety of products used in human food, animal feed, cosmetic, pharmaceutical and other technical use. Edible by-products include variety meat (liver, kidney, heart, brain, and tongue), fats, beef extract, stomach, guts or intestines and bones. Non-edible by-products include hides & skins, tallow & greases, blood, bone meal, meat meal, wool & hair, horns and hooves.

In order to value add the produce; establishment of livestock processing zone at appropriate locations in Balochistan is of utmost importance. This will not only provide opportunities for the existing farmers and dealers to add value to the livestock produces but will attract new investors to invest in the sector. It will create opportunities for small farmers to increase their investment / farm size leading towards economic uplift. The project will provide ample opportunities for value addition in meat and other by products enhancing local consumption and exports. Additionally this facility will also encourage investment in other required inputs for rearing of livestock including livestock feed, medicine and vaccine etc.

## **6 - Recommendations for Increased Small Ruminants Sector Productivity and profitability.**

The potential of livestock in domestic protein is enormous. Its development can open more avenues for poverty alleviation and foreign exchange earnings. Goat and sheep population can be enhanced by providing more ranges and pastures. The farmers keep animals for meat, milk, leather, farmyard manure, and wool/hair. This shows their dependence on livestock raising. There is a need to harness the potential of the area. It is necessary to develop alpine pastures on the existing ranges.

To make livestock more profitable the following recommendations may be considered for policy makers, researchers and extension workers:

- Feed supply should be increased by introducing high yielding fodder varieties like Alfalfa and Mott grass etc.

- Range management is vital in supplying additional feed for animals in hilly areas because of the paucity of land for fodder cultivation. Proper management of ranges especially through controlled and rotational grazing can increase their carrying capacity.
- Feeding should be practiced after chopping and in wooden or concrete mangers, mixing of green fodder with dry fodder and treatment of wheat straw and dry grasses with urea should be encouraged.
- Vaccination against contagious diseases and regular de-worming should be practiced.
- High milk producing breeds should be introduced in the area and poor producing should be culled out and selective breeding should be encouraged and cross-breeding with exotic animals should be done to improve milk production.
- Moreover, artificial insemination and cross- breeding should be encouraged for the improvement of the breeds; establishment of a dairy industry in the area for processing of surplus milk and its trans-shipments to other parts of the country is pre-requisite.
- Development of large livestock farms should be encouraged as these are more cost-efficient and productive than the small farms. The proper knowledge of young stock fattening may lead to a profitable venture to produce and supply quality mutton to the national and international food chain.
- Investment friendly Regulatory Framework and Fiscal Policy (Creating a favorable business environment and eliminating unnecessary obstacles)
- Participation of private sector including Associations and Trade bodies in formulation and implementation of policies.
- Consistencies in policies, conducive environment.
- Increased Coordination among the concerned stakeholders and livestock department (cross-departmental and stakeholder consultations)
- Infrastructure development: veterinary hospitals, dispensaries, laboratories, mobile units, artificial insemination facilities, up gradation of Slaughter houses and establishment of new slaughterhouses on international standards
- Training and development program for the capacity building of Livestock Department staff working at the community level
- Skill development and training programs for the farmers
- Facilitation of livestock farming on commercial scale
- Incentives for private investors in feed plants, meat processing plants and milk plants.
- Technological up gradation for value addition and post-slaughter treatment of meat and hide.
- Facilitation of private sector investors for exports of meat and dairy products.
- Modalities for public / Private Joint Ventures and revival of sick dairy plants and other units.
- Marketing Support and Facilitation. (Lack of information on target market quality requirements and lack of knowledge on how to achieve these quality levels)
- Financial Support and Facilitation. (Increasing access to formal finance, simplifying documentation Micro Finance Schemes Development)
- Preservation of existing water resources and construction of new water resources.
- Measures for the production of fodder/ pastures as a source for locally grown feed.