Punjab's Strategic Approach to CPEC for Livestock Sector Development – The Urban Unit

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OVERVIEW

The livestock sector in Pakistan has demonstrated consistent growth, significantly contributing to both the agricultural economy and the national GDP. In the fiscal year 2023-24, livestock accounted for 60.84% of the agricultural sector's value addition and 14.63% of the overall GDP, marking a growth rate of 3.89% from the previous year (Finance Division, 2024). The gross value addition of the livestock sector increased from Rs5,587 billion in 2022-23 to Rs5,804 billion in 2023-24 (Finance Division, 2024).

Punjab, the largest province, continues to house the majority of the livestock population. The sector not only supports agriculture but also underpins related industries such as meat and dairy processing, leather production, tanneries, and various wholesale and retail sub-sectors. Despite its substantial economic

contribution, the livestock sector has not reached its full potential. Challenges persist, including suboptimal productivity, inadequate preventive health measures, and quality standards that fall short of global benchmarks. These issues are attributed to genetic limitations of local breeds and broader market distortions.

The Economic Survey of 2022-23 highlighted discrepancies in livestock data, primarily due to reliance on outdated census figures from 2006. For instance, while Punjab's cattle population was reported at 14.9 million in 2018, estimates for 2022-23 surged to 27.3 million, indicating significant data inconsistencies. An accurate and up-to-date livestock census is essential for informed policymaking and sustainable sector growth.

To address these challenges, it is imperative for the government to focus on developing the animal by-product industry. This includes enhancing tanneries, improving the processing and packaging of offal, hooves, horns, and blood, and adding value to milk and meat products. Establishing robust business linkages among stakeholders across the supply chain can serve as a catalyst for improved productivity and increased exports. Given the livestock sector's significant share in both national and provincial GDP, along with its diverse export potential—particularly in halal meat—it is crucial to prioritize its development, a facet that has historically been overlooked.

TRADE INVESTMENT SCENARIO

China's agricultural trade experienced a 6.8% year-on-year decline in the first half of 2024, totaling $158.0 billion. However, exports saw a modest increase of 2.0% during the same period (Ministry of Agriculture and Rural Affairs of China, 2024). In contrast, Pakistan's food group exports surged by 44.77% in July 2024, reaching $475.767 million compared to $328.632 million in July 2023 (Pakistan Today, 2024). Notably, meat and meat preparation exports grew by 23.65%, amounting to $511.688 million in the fiscal year 2023-24, up from $425.605 million the previous year (Pakistan Business Council, 2024).

China remains a significant importer of agricultural products, with imports valued at approximately $234.1 billion in 2023 (Statista, 2024). This presents a substantial opportunity for Pakistan to enhance its meat and dairy exports. Collaborating with China to adopt advanced meat and dairy processing technologies could add value to Pakistan's livestock products, making them more competitive in the Chinese market. Furthermore, China's investments in agriculture, forestry, and fisheries have been substantial, with overseas investments valued at $26 billion in 2016. These investments span livestock farming, fishing, processing, farm machinery, inputs, seeds, and logistics (Ministry of Agriculture and Rural Affairs of China, 2016). Engaging with Chinese enterprises could provide Pakistan with access to capital, technology, and expertise, fostering growth in its livestock sector.

By leveraging China's technological advancements and investment potential, Pakistan can enhance the value addition of its livestock products, thereby increasing exports and contributing to economic growth.

KEY OBJECTIVES

The strategy is drawn from the 3 key objectives of livestock sector to reap maximum benefits from CPEC:

- Contribute towards poverty alleviation and economic development of the province through provision of an enabling environment and support services in the livestock sector through collaboration with China.
- Exponential increase in yield of livestock products by introducing modern production mechanisms, disease prevention and providing high quality nutritional feed.
- Incorporating modern processing technologies to move towards high value-added meat and dairy products and increasing exports by better orientation of livestock products

KEY CHALLENGES

Sector major challenge are reluctant attitude towards adoption of innovations, out-dated mechanization practices, low productivity per animal, poor & expensive transportation system, less focus on commercialization & industrial approach, capacity building of farmers, veterinary institutes, missing of integrated approach between industry, field & research, absence of need base R&D, inadequate availability of credit to farmers particularly small farmers and salient issues/ challenges are deliberated in detail below:

- **Low productivity:** Although Punjab is a major producer of livestock products, the average productivity of livestock is much lower as compared to world average due to inadequate availability of feed and fodder, poor breeding practices, poor management, poor husbandry practices, animal diseases, etc.

- **Low quality feed, fodder and scarcity of minerals, nutrients and quality water:** The gap between the requirement and availability of quality feed and fodder for livestock is increasing day by day.
- **Poor disease control, diagnostics, surveillance infrastructure:** The preventable diseases of animals in Punjab are causing a huge economic loss in terms of is in billions of rupees. The FMD alone causes loss of Rs. 8 billion in a year.
- **Shortage of vaccines:** The shortage of vaccine is a major impediment to move towards eliminating the preventable diseases; to minimize the economic losses of diseases and to gain access to high-end export markets.
- **The poor breeding services and genetic upheaval:** The breeding services despite consuming major chunk of the budget did not produce desired result due to absence of a direction and linkage of breeding activities and goals with holistic development of the livestock sector.
- **Lack of demand driven applied research and underdeveloped extension services:** There is state of the art laboratories with equipment, chemicals, kits and trained HR form best institutions of the world but they could not contribute to the sector as per their capabilities, the reason behind that is the extension workers are mostly ill-motivated with little incentive to work and bring about the change.
- **Poor value chains and lack of value addition:** Currently, there is no value chain developed in the province. The contribution of the corporate sector is very restricted in the livestock sector, which is almost 1%. Whereas, the contribution of the commercial sector in the livestock sector is around 4%, due to this poor value chain linkages, there is no value addition and processing of the meat and dairy products as per the full potential
- **Market distortions and no farm gate pricing:** Currently, markets are not perfect and not playing their role. Middlemen (milkman and corporate milk collectors) exploit the livestock producers by charging lower and differentiated prices from different areas.
- **Lack of institutional coordination and overlapping mandates:** There is a lack of coherent livestock policy for the province and no coordination or collaboration mechanism for overlapping role of the institutions.
- **Lack of bank credit for livestock:** Bank loans to the agriculture sector have been on a rise for some years. However, only a fraction of the said lending i.e., just 7% was given to the livestock sector even though livestock contributes 58% of agriculture sector

KEY POLICY INTERVENTIONS

A multiple-approach strategy needs to be adopted for defining strategic interventions, focusing on collaboration in areas where Chinese livestock practices are more advanced to facilitate technological transfer. Additionally, a comprehensive examination of Pakistan's export basket and China's import basket needs to be undertaken to identify promising livestock and livestock-processed products that offer opportunities for increasing and diversifying Pakistan's exports to China and other global markets. Using these multiple approaches, the following strategic framework needs to be defined.

Pillar I: Enhancing Yield and Genetic Improvement

To meet the growing demand for high-quality livestock products, improving yield needs to be a priority. In the short term, modern breeding techniques need to be introduced to enhance productivity, including the expansion of artificial insemination facilities in collaboration with China. As part of the medium-term strategy, the production of high-quality semen needs to be increased, and indigenous breeds need to be improved using advanced reproductive technologies such as in vitro fertilization (IVF). In the long run, efforts need to be focused on developing exotic meat breeds that meet global standards and enhancing the productivity of local breeds through partnerships with international research institutes.

Pillar II: Advancing Nutrition and Disease Prevention

A well-nourished and disease-free livestock population is essential for sustainable growth. The short-term focus needs to be on improving animal nutrition through advanced fodder technologies like silage production, alongside the establishment of Disease-Free Zones and a Foot and Mouth Disease (FMD) vaccine production unit. Moving forward, medium-term strategies need to include upgrading animal diagnostic laboratories, identifying disease-free zones, and establishing modern fodder production units in collaboration with Chinese experts. The long-term vision needs to be the development of a specialized research institute for livestock nutrition and forage research, the creation of a centralized database for animal identification and health monitoring, and the full implementation of disease-free zones to facilitate safer livestock trade.

Pillar III: Strengthening Extension Services for Farmers

For a successful transformation of the livestock sector, extension services need to evolve to integrate modern technology and knowledge-sharing mechanisms. In the short term, innovative approaches need to be adopted to provide farmers with the necessary knowledge to improve production and disease management. Medium-term objectives need to focus on capacity-building programs for extension staff, training them as master trainers, and establishing bilateral knowledge exchange initiatives. In the long run, the approach needs to be further strengthened by upscaling technical expertise within the Livestock and Dairy Development (L&DD) department and implementing the "Whole Family Extension Approach," ensuring uniform awareness and adoption of best practices among livestock breeders.

Pillar IV: Driving Technological Development

The modernization of the livestock sector requires continuous technological advancements. In the short term, research and development (R&D) institutes need to be established to attract large-scale investments in vaccine production, fodder processing, semen production, and drug development. Medium-term efforts need to focus on setting up a quality examination and standardization center in collaboration with China and exchanging technology to enhance value addition for dairy and meat exports. Over the long term, dedicated R&D centers need to be developed to introduce new livestock breeds and improved forage varieties, ensuring that the sector remains innovative and globally competitive.

Pillar V: Boosting Bilateral Investment and Trade

Investment and trade are key drivers of economic growth in the livestock industry. In the short term, a business-friendly environment needs to be created to encourage business-to-business (B2B) collaborations between local and Chinese companies, particularly in livestock product value addition. In the medium term, incentives need to be introduced to promote the establishment of meat and dairy processing units within Special Economic Zones (SEZs), while streamlined one-window operations need to be implemented to facilitate smoother business transactions. The long-term strategy needs to be focused on ensuring that meat and dairy products meet international certification standards, enhancing collaboration between industries and institutions for research and technology transfer, and improving production efficiency to meet global trade demands.

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