

Future policy interventions for the development of livestock sector in Pakistan

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Abstract

Livestock contributed approximately 61.9% of agriculture GDP and 14.0% to the national GDP during 2021-22. Animal husbandry is the most significant economic activity of the rural dwellers of Pakistan. More than 8 million rural families derive around 35-40% of their income from livestock production. Gross value of livestock has increased from 5,269 billion PKR to 5,441 billion PKR in (2021-22) according to Economic Survey of Pakistan, 2021-2022. However, the sector is hampered by low productivity, limited feed resources, poor breeding practices, poor healthcare, poor extension, less government support and absence of organized marketing system.

Keywords: Pakistan livestock economy, livelihood, GDP, Integrated agriculture, Productivity

Overview

In addition to provide a means of subsistence for rural dwellers, livestock has the capacity to combat food insecurity and hunger by supplying quality food (Alvi et al., 2015). Livestock has dominant effect on domestic needs fulfillment and food for table (Ahmad et al., 2019). Livestock in Pakistan has not only socioeconomic aspects but also has contribution towards transportation, draught power and as source of renewable energy and fertilizer (Shahid et al., 2013). The Government of Pakistan wants to strengthen the national economy while eradicating diseases, poverty, and illiteracy. Pakistan has also adopted the United Nations' Millennium Development Goals (MDG) programme, whose first aim is the potential decline in the incidence of hunger. In 2018, the Government of Pakistan and the UN signed the UN Sustainable Development Framework (UNSDf, 2018). Since livestock production is the primary source of income for the majority of rural households in Pakistan, it plays a pivotal role in achieving this crucial MDG of UN.

1. Prevailing Livestock Production Systems

The prevailing livestock production systems in Pakistan include: **Traditional Livestock Production System:** Is prevalent in rural areas, where small-scale farmers keep livestock for their subsistence, animals are kept in open fields, grazing and the breeds are indigenous (Hasnain and Usmani, 2006). **Intensive Livestock Production System:** It is commercially practiced on large scale in urban areas, maintaining exotic breeds and is high-input high-

output system (Tariq, 2013). **Semi-Intensive Livestock Production System:** This system is practiced in both rural and urban areas, and the farmers maintain a mix of indigenous and exotic breeds on grazing and supplementary feeding (Tariq et al., 2014). **Feedlot Fattening System:** This system is mainly used for fattening of beef cattle, fed high-energy diets for meat (Sarwar et al., 2002). **Rangelands Livestock Production:** Livestock is reared on pastures and rangeland, mainly practiced in Balochistan and Gilgit Baltistan areas (Hameed et al., 2022).

2. Livestock Labor Force and Livelihood options in Pakistan

Livestock sector provides employment opportunities and the livestock labor force is estimated around 8 million people in Pakistan, which includes both full and part-time workers (Ahmad et al., 2019). The majority of them are engaged in small-scale, subsistence farming. However, there are also a significant number of people employed in urban areas in commercial farming, meat processing, and other related industries (Tariq, 2013). In rural areas, livestock farming is often a family-based activity, with members of the family involved in various aspects of animal husbandry, such as feeding, milking, and caring for the animals (Garcia et al., 2003).

3. Availability of feed resources for livestock

The area of grazing land in Pakistan is declining due to increasing population pressure and urbanization, and for cash-crops (Tariq et al., 2014). The cost of feed ingredients, such as grains and protein sources, has been increasing, making it difficult for small-scale livestock farmers to afford quality feed (Habib et al., 2007). The quality of feed in the market is often poor due to processing, storage facilities, and adulteration. Another issue is lack of knowledge and awareness about feeding requirements (Tariq, 2020). Similarly, climate also affects feeding of ruminants in Pakistan (fodder scarcity months).

4. Current status of livestock breeding practices and national breeding policy in Pakistan

Livestock breeding practices in Pakistan vary depending on the species and the region (Tariq, 2013). Some common breeding practices include: Natural breeding and Artificial insemination. AI is most common practice on commercial dairy farms. Embryo-transfer is a relatively new breeding practice in Pakistan (Rana et al., 2021). The government implemented various policies and programs including National AI Program, Livestock Breeding and Development Project, National Animal Genetic Resources Management and Conservation Programme to improve the genetic potential and productivity of livestock through adoption of modern breeding technologies (Government of Punjab, 2014).

5. Livestock healthcare and disease surveillance

The livestock healthcare system in Pakistan is primarily based on public and private veterinary services. The public veterinary services are provided by the federal and provincial governments through the Livestock and Dairy Development Department. Private veterinary services are offered by private veterinarians and pharmaceutical companies (Afzal, 2009). The disease surveillance is essential to identify and monitor the occurrence of infectious and non-infectious diseases in animals, including livestock (Ali et al., 2022). Some of the major challenges to healthcare include: lack of adequate resources, outdated infrastructure, limited awareness and inadequate disease surveillance (Bilal et al., 2022 and Shaikh et al., 2022).

6. Existing livestock marketing system in Pakistan

Animals in Pakistan are purchased and sold in traditional weekly rural markets according to phenotypic characteristics (Shafiq and Kakar, 2006). Usually, animals are bought by middlemen, who only estimate the weight of animals from its appearance (Afzal, 2003). The livestock market is fragmented, with no centralized marketing system dominated by middlemen and brokers, leading to low prices for farmers and high prices for consumers (Khan et al., 1991). Secondly, the lack of infrastructure, including roads, storage facilities, and slaughterhouses, hinders the livestock sector development. Thirdly there is no standardized grading and labeling systems. Fourthly, the supply chain for livestock and its products is inefficient (Afzal, 1998). Last but not least, there are concerns regarding the health and safety of livestock and its products and public health issues.

7. Need of establishment of a national livestock identification and traceability system

Establishing a national livestock identification and traceability system in Pakistan can have several benefits. A livestock traceability system can help in controlling the spread of diseases by enabling quick tracking of infected animals (Center for Disease Control, 2009). Traceability systems can also help in ensuring the food safety by rapid identification and removal of contaminated products (Prinsloo and De Villiers, 2017). Livestock identification and traceability systems can provide a platform for value-added services (Grossman, 2006). A traceability system can promote transparency in the livestock sector by providing information on the origin and movement of the animals (Becker, 2006).

8. Government support for livestock farmers in Pakistan

As important sector of Pakistan's economy livestock needs to be provided with more government support for its different functions. One of the major challenges of livestock farmers in Pakistan is the lack of access to credit facilities (Ullah et al., 2020). This makes it difficult for farmers to invest in their businesses and improve their livestock production (Ullah et al., 2020 and Saqib et al., 2018). There is lack of proper infrastructure and farmers often have to travel long

distances to get their animals treated (Rehman et al., 2017). There is a no subsidy on high-quality animal feed and veterinary medicines, which hinders growth of the sector (Tariq et al., 2021).

9. Issues of livestock extension services

The government has also failed to provide adequate training and extension services to livestock farmers (Idrees et al., 2007). Many farmers lack access to extension services. However, there are several issues facing livestock extension services in Pakistan, including, lack of access to information and training, limited resources, poor infrastructure and Lack of coordination, and lack of farmer participation (Qmar, 2004 and Ullah, 1998). Many farmers in Pakistan are not actively involved in livestock extension programs, which can limit the effectiveness of these programs (Idrees et al., 2007).

Conclusions

In conclusion, adopting and putting into practice these measures would aid in addressing the challenges the livestock industry is currently facing and would encourage its sustainable expansion and development for the benefit of the national economy. In contrast to the available feed resources, the livestock population is increasing quickly every year in both the commercial and rural sectors. Hence, rather than boosting livestock numbers, more attention needs to be placed on raising production per animal. Efficient livestock management, feeding, housing, preventative measures, disease surveillance, and the creation of an effective organized marketing system will help to meet more ambitious sustainable production targets.

Suggestions and Way Forward

To improve sustainable livestock productivity in Pakistan, the following steps could be taken: Enhancing the genetic potential of local cattle through selection, crossbreeding, and artificial insemination (AI). Similarly, improved breed potential and effective management will lead to increased rates of conception, growth, and milk yield as well as shorter calving intervals. Urea and molasses treatment can be used to improve the

quality of inferior fodders and straws to fulfill feed requirements. Development of economical, efficient and flexible housing plans by experts for livestock can potentially increase livestock productivity. Enforce vaccination programmes in addition to providing appropriate and timely veterinarian care can improve overall profitability. The livestock industry can be greatly strengthened by the implementation of sound policies. Processing surplus milk into powder will save enormous amount of foreign exchange being spent on the import of dry milk. Also, promoting the use of feedlots fattening for cattle, male buffalo calves, sheep, goats, and other animals that were culled will help in meeting demand for meat. Developing meat grades, preservation and proper marketing and pricing system for livestock is also the need of the hour. Supporting commercial producers by providing incentives and services will encourage commercialization in the sector. Manure should be handled carefully, preserved, and applied as needed to enhance soil fertility and improve the environment. There is need for development of organized livestock marketing system for increasing investment in the sector.

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