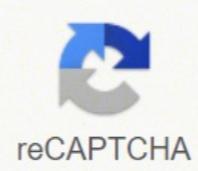




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equency		p-value	
I23	BSE	Healthy	D23/
0.98			0.02
0.27	< 0.00001	—	0.51
0.43	—	< 0.00001	0.35
0.32	< 0.00001	—	0.45
0.39	—	< 0.00001	0.37

equency		p-value	
I12	BSE	Healthy	D12/
0.965			0
0.33	< 0.00001	—	0.4
0.49	—	< 0.00001	0.2
0.42	< 0.00001	—	0.3
0.46	—	< 0.00001	0.3

attribute	Total protein (g/l)	Total whey (g/l)	Casein (g/L)
AA	34.70±1.61	4.34±0.32	30.36±1.35
AB	35.46±0.79	4.30±0.15	31.09±0.80
BB	32.43±1.25	3.86±0.25	28.58±1.27
AB	30.74±2.22	3.61±0.11	27.67±0.78
AB	33.18±1.86	4.08±0.19	23.71±0.57
AA	31.29±0.79*	3.50±0.66*	27.79±1.57*
AB	27.8±1.45*	4.43±0.47*	23.37±1.39*

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## SURVEY OF LIVESTOCK PRODUCTION AND MANAGEMENT IN KHYBER PAKHTUNKHWA PROVINCE OF PAKISTAN

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This study investigated the existing infrastructure and milk yield performances of different livestock breeds in Khyber Pakhtunkhwa. In this regard 70 livestock farmers were interviewed from different zones of Khyber Pakhtunkhwa including rice-wheat, mixed cropping, low intensity, rainfall and peri-urban. Results revealed that livestock is the main source of income for 62% of the respondents followed by 21% crop farming. In the study area, 22% of the farmers keep local breed of cattle followed by Sahiwal (18%), Holstein-Friesian (9%). Similarly, in the case of buffalo, Nili Ravi is very common and kept by 38% respondents followed by local breed (22%). In terms of milk production (liters per day) Sahiwal breed of cow is the most productive (9.3 liters per day) followed by Holstein-Friesian (8.7 liters per day) and cross breed (8 liters per day). The area farmers get higher yield of milk from local buffalos (7.9 liters per day) followed by Nili Ravi (7.1 liters per day). Results further revealed that large farmers are more efficient in getting milk. Lack of commercial dairy farms, weak infrastructure, lack of financial facilities etc. is some of the constraints hindering productivity of livestock farmers in the study area.

**Keywords:** Milk yield, livestock breeds, farm size, Khyber Pakhtunkhwa

### INTRODUCTION

Like other provinces of Pakistan, in Khyber Pakhtunkhwa livestock also plays a pivotal role by providing food (milk and meat) and a source of income generation. Besides these, livestock serves as store of wealth for the rural peasant, means of transportation and draught power and organic fertilizer for the farm. According to Livestock Census (1996), the province possesses 4.2 million (21%) cattle, 1.4 million (7%) buffaloes, 2.8 million (12%) sheep and 6.8 million (16%) goats. The province contributed 9% in milk, 24% in beef, 15% in mutton, 20% in hides, 18% in skins, 28% in wool and 17% in hair production of Pakistan.

In Khyber Pakhtunkhwa, the production and distribution system of livestock and livestock products are traditional and poorly developed. Livestock are reared under sedentary, semi-nomadic and nomadic systems (Sadig *et al.*, 2003).

Livestock farmers belong to small/landless farmers and remain under extensive production system. However, a few

large cattle and buffalo farms have also been developed especially in the peri-urban areas.

In the recent past, several attempts have been made to increase livestock production while very little attention has been paid to marketing (Jalil *et al.*, 2009). In many instances, accomplishment in production is not achieved because of poor marketing as farmers usually hesitate in spending additional finances in the adoption of modern production technology unless they are assured of stable market prices.

Plainly, production and marketing are side by side activities i.e., production is considered the first half of any economic activity and marketing is the other half (Lashari *et al.*, 1995). Therefore, it is widely believed that for any successful enterprise, both the production and distribution activities are needed to be performed jointly and efficiently. This in turn not only brings back welfare to the producers but to the consumers as well (Khan, 1999). The livestock sector has been neglected by both the policy makers and researchers (Chaudhry *et al.*, 1999; Burki *et al.*, 2004; Jalil *et al.*, 2009). Consequently, the existing literature on livestock sector is inadequate in Pakistan in general and in Khyber Pakhtunkhwa in particular. There is also lack of reliable information about the livestock population and its products. Therefore, this study was conducted to analyze the existing infrastructure and to estimate the milk yield performances of different livestock breeds across the small, medium and large/commercial livestock farms in Khyber Pakhtunkhwa.

### MATERIALS AND METHODS

The livestock farms were classified into small (< 6 large ruminants), medium (7-20 large ruminants), and large/commercial (> 20 large ruminants) on the basis of number of livestock holdings. According to the definition of farms 70 livestock farmers were interviewed from different zones of Khyber Pakhtunkhwa including rice-wheat (10 farmers from D.I. Khan), mixed cropping (15 farmers from

## Taxonomical classification

- Kingdom : Animal
- Phylum : Chordata
- Class : Mammalia
- Order : Artiodactyls
- Sub order : Ruminantia
- Family : Bovidae
- Sub Family : Bovines



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