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First checklist and distribution of sheep breeds of Khyber Pakhtunkhwa, Pakistan

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Abstract

An extensive survey was carried out on the sheep breeds of Khyber Pakhtunkhwa. A total of 487 samples of Sheep breed were collected and sorted out into 10 species viz: Kaghani, Rambouillet, Ramghani, Afghani, Gauder, Balkhi, Hashtnagri, Damani, Waziri and Australian. Out of which Australian and Ramghani showed its wide diversity in Khyber Pakhtunkhwa and over all percentage of Australian was recorded significantly highest i-e: 13.75% followed 11.08% of Ramghani while significantly least percentage i-e: 8.41% and 8.62%, for Waziri and Rambouillet respectively. In addition to this, distribution and checklist of sheep breed in Khyber Pakhtunkhwa is provided for the first time.

Keywords: Breeds, Khyber Pakhtunkhwa, diversity, checklist, samples

1. Introduction

Domestication of livestock by man introduced a major cultural revolution. History of the domestication of sheep is reported as 7000 BC in the Near East [13]. Domestic sheep (*Ovis aries*) are quadrupedal, ruminant mammals typically kept as livestock. Archaeological evidence shows that the sheep was domesticated approximately 9000 year ago in the border region between Syria and Iraq [15]. Approximately 995 sheep breeds have been documented at global level, where Asia is harbouring 265 sheep breeds [5].

In Pakistan most of the short tailed sheep are reared in northern areas. The fat-tailed sheep are common in western part of the country including FATA and Balochistan. Depending upon the breed and selective pressure, sheep show range of height and weight. Typically, sheep weight between 45-100 Kg and with the larger rams between 45-160 Kg. A total of 33 native sheep breeds are reported in Pakistan of these seven (3 fat-tailed and 4 thin-tailed) are native to Khyber Pakhtunkhwa (KP). The fat tailed breeds (Balkhi, Hashtnagri and Michni) are in the central and plain portion of the province. Balkhi, is however, scattered throughout the province, as well as in Punjab and Afghanistan [10].

Several authors [1-4, 6-9, 14, 16, 17] have carried out significant work on various aspects of the Sheep breeding from Indian subcontinent including Pakistan. But, unfortunately information available about these Sheep breed is untouched from this area. Hopefully, finding of present investigation will provide a firm basis for the future researchers to carry out research from this region.

2. Materials and Methods

An extensive survey was carried out on the sheep breeds of Khyber Pakhtunkhwa. The sampling was done from different sites of Mansehra district including Kaghan, Naran, Jalkhad, Balakot and Guldhari during the year 2014-2016. The other sampling sites were D. I. Khan, Wana, Charsadda, Shabqadar, Mohmand Agency, Swat, Buner and other hilly areas of the province. Samples were identified by using methodologies of [1, 8] on the morphological basis.

3. Results and Discussion

As a result of this work, a total of 487 samples of Sheep breed were sampled pertaining to 10 types of sheep's breed were found from different localities of Khyber Pakhtunkhwa during the year 2014-2016. Following is checklist of species (Fig. 2): Kaghani, Rambouillet, Ramghani, Afghani, Gauder, Balkhi, Hashtnagri, Damani, Waziri and Australian.

The sheeps are quadrupedal, ruminant mammal naturally reserved as livestock. Like all ruminants, sheep are members of the order Artiodactyla, the even-toed ungulates [7]. The domestic sheeps are multi-purpose animal, and the more than 200 breeds now in existence

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were created to serve these diverse purposes [6, 7]. Breeds are often considered by the type of their wool. Fine wool breeds are those that have wool of great crimp and density, which are ideal for textiles [9, 11].

As a result of present study Australian and Ramghani showed its wide diversity in Khyber Pakhtunkhwa and over all percentage of Australian was recorded significantly highest i-e: 13.75% followed 11.08% of Ramghani while significantly least percentage i-e: 8.41%, 8.62%, and 5.76% for Waziri and Rambouillet, respectively. While Kaghani, 10.67%, Hashtnagri, 10.47%, Gauder and Damani 9.03%, and 9.44% was recorded for Afghani and Balkhi (Table. I, Fig.1). Overall, these finding suggests that Australian and Ramghani were found in wide diversity and having prevailing status throughout the region on contrary to this, other studied breeds i-e: Kaghani, Hashtnagri, Gauder, Damani, Afghani and Balkhi. Beside this, less population of Waziri and Rambouillet was studied for the first time from this region. (Table. II).

Previously, 33 native sheep breed from Pakistan has been

reported. Of these seven (3 fat-tailed and 4 thin-tailed) are native to Khyber Pakhtunkhwa (KP). Additionally, the fat tailed breeds (Balkhi, Hashtnagri and Michni) are inhabitant of the central and plain portion of the province. However, Balkhi was scattered throughout the province, as well as in Punjab and Afghanistan [10]. During the study Australian was found scattered throughout the province while Sheep and goats contribute significantly to the subsistence, economic and social livelihoods of a large human population under low-input, smallholder production systems in developing countries. Increasing human population and urbanization, coupled with changing consumer preferences is creating more demand for these animals and their products [11]. A detailed description of growth, carcass and reproductive traits of Sabi sheep from Zimbabwe was observed [12]. Present study provides checklist along with distribution of breeds from Khyber Pakhtunkhwa for the first time. Hopefully, finding of present study will provide a firm basis for the future researchers concerned with sheep breeds fauna.

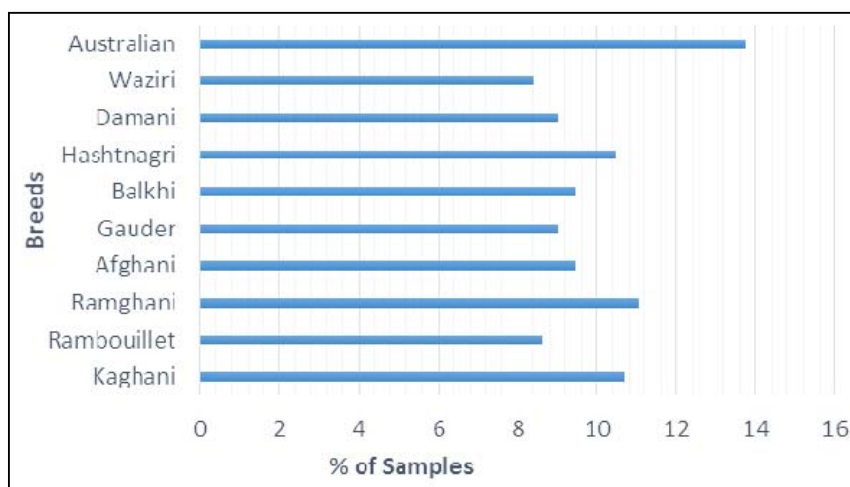


Fig 1: Showing the % of Sheep breed occurring in Khyber Pakhtunkhwa

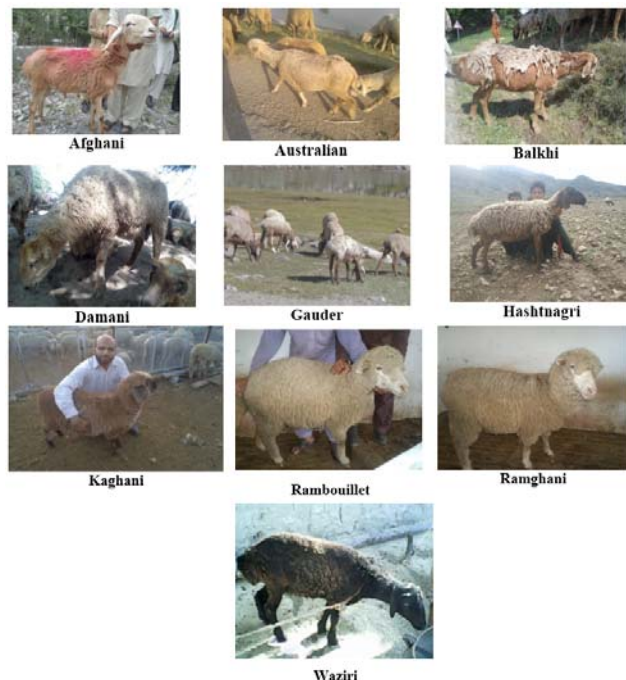


Fig 2: Showing sheep breeds found in Khyber Pakhtunkhwa

Table I: Showing samples of Sheep breed

Breeds	No. of Samples (n=487)	%
Kaghani	52	10.67
Rambouillet	42	8.62
Ramghani	54	11.08
Afghani	46	9.44
Gauder	44	9.03
Balkhi	46	9.44
Hashtnagri	51	10.47
Damani	44	9.03
Waziri	41	8.41
Australian	67	13.75

Table II: Showing distinguished characters of sheep breeds

S. No	Sheep Breeds	Tail	Type	Weight Kg		Colour				Ear	Type	Cross of	Origin
				Ram	Ewe	Body	Head	Legs	Wool				
1.	Kaghani	Thin	Wool and meat	32	27	Dark brown and gray	Dark brown	Dark brown	Brown/Gray	Small	Pure	—	Mansehra District
2.	Rambouillet	Thin	Wool and meat	30	24	White	White	White	White	Small	Pure	—	USA
3.	Ramghani	Thin	Wool and meat	30	25	White	White	White with tan knee	White	Small	Cross	Rambouillet Ram x Kaghani Ewe	Cross breeds in (Mansehra) KP
4.	Afghani	Fat	Mutton and milk	32	28	Light brown	White	Camel coloured	Camel coloured	Long	Pure	—	Afghanistan and tribal areas of KP
5.	Gauder	Fat with Thin end	Wool and meat	32	26	Brown	Dark Tan	Dark Tan	Brown/Gray	Long	Cross	Afghani Ram x Kaghani Ewe	Cross breed in KP (Mansehra)
6.	Balkhi	Fat and tucked	Meat	55	38	Dark brown and gray	Light tan	Tan	Brown	Long	Pure	—	All KP
7.	Hashtnagri	Fat and tucked	Wool, Mutton and milk	37	30	Brown	Black/Dark brown	Black/Dark brown	Dark brown	Long	Pure	—	Hashtnagar KP, Momand Agency
8.	Damani	Thin and short	Wool and meat	32	27	Off White	Tan	Camel coloured	Off White	Small	Pure	—	(DI Khan) and Bannu
9.	Waziri	Fat and long	Wool and Meat	40	30	Brown	Black	Brown	Dark brown	Small	Pure	—	Waziristan, D.I Khan and Bannu
10.	Australian	Thin and long	Meat	31	28	White	White	White	White	Small	Pure	—	Australian

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