

Indigenous Livestock Breeds (ILBs) and the LIFE Approach! A case study in Balochistan

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INTRODUCTION

Balochistan (**3,47,200 sq Km**), makes up **44%** of Pakistan by area

ASAL composed of mountains and deserted lands

The province is more than **90%** rangeland (**only 52% is well suited for grazing**)

Northeastern part of the province is good and southwestern is poor in vegetation

Southwestern part has the roots with Mehergarh culture (goat, sheep, cattle and **camel**)

Northeastern (famous Suleiman) has roots with the Bakhdi culture (cattle, goat, sheep, horse, donkey and camel)

OLD CIVILIZATIONS AND LIVESTOCK BREEDS



Excavated bull seal from the ruins of Mehergarh and present day Bhagnari bull

OLD CIVILIZATIONS AND LIVESTOCK BREEDS

Today's Kankrej of Thar and Rajasthan



Excavated from the ruins



OLD CIVILIZATION AND MORAK GOAT



MORAK BREED IS VERY CLOSED TO ITS WILD ANCESTORS

The pastoralists like the breed close to wild ancestors because of many reasons, i.e. disease and drought resistance and production in hostile environment

OLD CIVILAZATION, BYBRIK AND DUMERI SHEEP



Indigenous Livestock Breeds and The Life Approach

- *Social and cultural context:* Association with the community, Breeding institutions, Local perceptions about the origin of the breed, Local terminology and ethnotaxonomy
- *2. Ecological and production context:* Breeding area, Local soil types and classification, Local farming system, Seasonal forage calendar, preferred grazing species
- *3. Livelihood significance (types of products):* Range of products and uses, Production performance, Reproductive performance
- *4. Management of the gene pool:* Local preferences (breeding goal), Special characteristics, Breeding mechanisms, Identification of top breeders
- *5. Population:* Population estimate, Population trend
- *6. Chances for sustainable use and conservation:* Pressures, Interest in revival and conservation by the local community
- *7. Baseline data to monitor social impact*

ILBs & THEIR SPECIAL TRAITS

- Each ILB has its own special trait
- Only the keeper of the relevant breed know its specialty
- Special trait is considered as one of the top breeding goal
- Special trait is not necessary to be phenotypically visible
- But some phenotypic traits are linked with special traits i.e. white color in camel resistant to surrah etc

CAMEL! THE BEST IN DROUGHT

- Pakistan has almost one million camel and 46 % camel found in Balochistan
- The long prevailed drought ↑↑ the importance of camel, due to it's viability in drought
- Demand for camel is ↑↑ & a good source of earning
- Characterization & documentation of local camel was still lacking
- Camel remains the best option for more milk production on one hand and the proper utilization of vast rangelands on the other.
- Camel milk production remains stable in almost all seasons, which is very important for the pastoral

CAMEL BREEDS

KOHI, a mountainous camel



KHARANI, desert camel



Kohi camel is called as Syed by its keepers mean's resistant to disease. Kharani camel produce more milk than any breed in the world (some specimen produces up to 40 liter per day)

Kharani produce in the harsh and hostile environment of the area

MILK PRODUCTION OF KOHI CAMEL

Parity	No & percentage	Mean age (Year±SE)	D.M.Y (kg±SE)	L.L (days±SE)	L.Y (kg)
1	3 (7.50%)	4.50d±0.32	6.045b±0.38	259±8.08	1566
2	9 (22.50%)	7.33c±0.88	8.784ab±0.68	231±24.64	2029
3	6 (15.00%)	8.75c±0.17	11.094a±1.21	275±2.34	3051
4	10 (25.00%)	11.45bc±0.76	11.025a±0.69	273±4.58	3010
5	4 (10.00%)	13.50b±0.29	11.732a±1.79	270±4.06	3168
6-8	8 (20.00%)	17.37a±0.50	10.964a±0.79	248±18.62	2719
Total/Mean	40 (100%)	10.48±0.34	10.22±0.43	259±7.00	2590

Kharani is under severe threat

The long and severe drought

Illegal export to Iran and Gulf countries where it is being slaughtered

Even pregnant animals are also slaughtered



CAMEL BREEDS

RAIGI



JATHI/RAIDI



Raigi camel is consistent milk producer with thick milk. Jathi is resistant to high temperature (53 C°) and has wide within breed diversity)
Raigi is also under threat, high slaughter rate in Afghanistan

CAMEL BREEDS

Brohi



Pahwali or Gaddai



Brohi breed is resistant to water scarcity can resist up to 2 weeks against water hunger.
Pahwali camel can walk long and can exist in low and wet weather

SHEEP AND GOAT

- Sheep is mainly used for meat
- Wool is use locally for rugs and carpets etc
- 46 % of the country sheep reside in Balochistan
- Kakari, Dumari, Kajalee, Bybrik, Balochi, Shinwari, Rekhsahni and Mangeli are the famous breeds
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- Goat is use for milk and meat
- In the southwest of the province mainly for milk
- 24% of the country goat reside in Balochistan province
- Suleimani, Khurasani, Lehri and Morak are famous

Kajalee

Found in northeast (Zhob)

Small in size with fine long wool

Use for meat

Sp trait is *the kall sakhta*

Mean resistant to dry year

Zar Kholi kezi

Mean excellent compensatory growth



Kakari

Larger than Kajalee

Long straight wool

Akhur, Ghalla sha Khuri

(Good response to grain/stall feeding)

Mostly use for Landi (local dry meat)



Dumeri

Fine wool

Medium size

Da Kal sakhtha

Sha khurak kawi (high thriftiness)

Some male but not all are horned

Live in the coldest region of the province in mountainous area



Shinwari or Shane Zarghone

Large size,
Colored wool

Special Trait

Long walk, fit for Nomadism

More marbling rate in meat making it appreciable for Landi purpose

Good response to grains



Balochi

Medium to large size

Animal of plain area (pat)

Sp. Trait more milk and meat for low intake

Hard to water shortage like camel

Hard to very high temperature (up to 50 c)



Mangeli

Colored Sheep

Medium size

Sp. Trait

Good milk in low in put

Good scavenger

Docile, easy to graze on small pieces of land



Rakhshani

Small size

Soft wool

Desert sheep

Sp. Trait hardy to drought years

High compensatory growth



Khurasani

Small sized black hairy goat with
brown face

horned

Sp trait

Long walk making it fit for nomadism

*More milk persistency (continue
milking for more days with constant
milk production)*



Kohi-Sulemani

Multicolored, horned breed

Mountainous in nature

Climb on trees

Sp. Trait

High compensatory growth rate

Tolerance to cold and long walk



MORAK

Mostly black and horned
But some other colors also
found

Sp. Trait

Close to wild ancestors

More milk in hard condition



CATTLE

- There are only two cattle breeds in Balochistan
- One is mountainous i.e. Kohi-Suleimani (Lohani)
- Small sized
- The other very famous Bhagnari
- Heavy breed
- Good for draught and beef

Kohi-Suleimani

Small size

Multicolored

usually use for beef and light
agricultural operations

Sp. Trait

Can climb mountain

*Can digest the hard and fibrous
roughages (bushes)*



BHAGNARI

Heavy sized draught
animal

Good future for beef

Catch high prices at Eid ul
Adha

Sp. Trait

Tolerate very high temperature

Change color

White in summer and tan in winter



EQINES

- The only horse breed in Balochistan is mountainous light breed
- The horses are only use in the mountainous areas for riding by the pastoralists
- The use of donkeys has increased many folds
- Use for draught in the remote areas and in the narrow streets of the cities for carting
- The donkey population is increasing
- There are two donkey breeds in the province i.e. Shinghari and Pundi

BALOCHI HORSE

Light small sized horse

Multicolor

Compact body

Sp. Trait

*Digest roughages efficiently and
do not need cereals in ordinary
conditions*



SHINGHARI DONKEY

Heavy size donkey

Mainly use by the nomads

Also use in the mountainous
area of Suleiman

Sp. Trait

Highly resistant to dry years



CHICKEN



- The seals of chicken was excavated from Mehrgarh
- Mostly use for games
- Fighting
- High prices
- *Sp. Trait*
- *Hardiness of the spur*
- *Stamina for fighting*

Camel also carry the disable individuals.



WAZIR