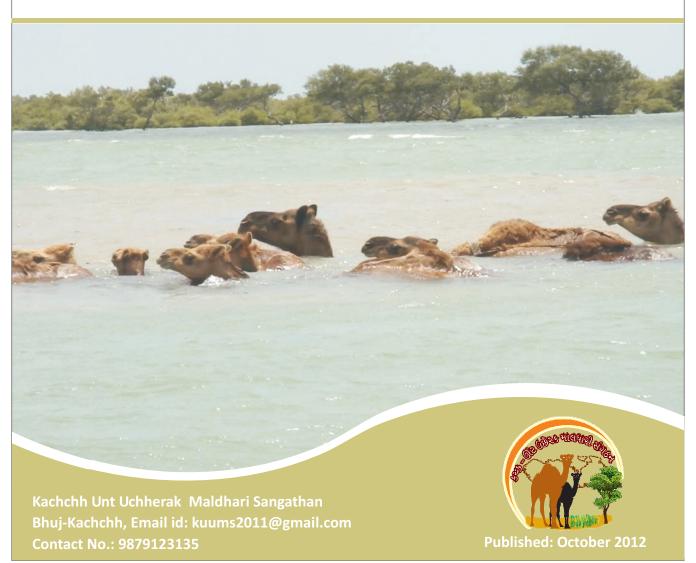
Kharai Camel

Amazing Camel Breed of Kachchh



Message



Dr. A.J Kachhiapatel
Director of Animal Husbandry
Gujarat State, Gandhinagar

I am very happy to know that Sahjeevan- Bhuj is publishing a Documentary Book-let of Kharai Camel-Amazing Camel Breed of Kachchh. As everybody knows, Gujarat is contributing significantly in the mega-biodiversity of Indian livestock, out of which Kachchh district has contributed in a wide range of biodiversity with unique livestock species, such as Banni Buffalo, Kankrej Cow, Kachchhi Goat, Patanwadi and Marwadi Sheep, and Kachchhi Camel.

I am very much glad to know that one more breed of camel is to be added in the present biodiversity of livestock of Gujarat as well as India owing to tremendous work done by team of Sahjeevan-Bhuj by a survey of-Distribution of Kharai camel breeders and Kharai camel population, Rearing practices, Special features of Kharai Camel, Socio-economic status and life style of Kharai Camel Breeders and publishing a Documentary Book-let on Kkharai Camel-Amazing Camel Breed of Kachchh.

I hope that this Documentary Book-let will prove useful and informative to all those who are interested and concerned with camel development, camel breeding and research as well as camel keepers.

I sincerely congratulate and wish all the best for publication of this Documentary Book-let and grand success to the occasion.

Date: 16-11-2011

Yours Sincerely,

(Dr. A.J. Kachhiapatel) Director of Animal Husbandry,

Gujarat State, Gandhinagar.

ntroduction

'Life in Arid region is due to livestock' and camel has been considered as lifeline in desert ecosystem. Kachchh district, apparently considered as dry region, has contributed unique livestock species, such as Banni Buffalo, Kankrej Cattle, Kachchhi Goat, Marwadi and Patanwadi Sheep, Kachchhi and Kharai Camel, Kachchhi-Sindhi Horse, not only for Gujarat but also to the nation. Rich livestock diversity in the district attributed the hard work of pastoral communities who have been conserving and protecting such germ plasm suited to the local ecosystem. The most interesting of such germ plasms is **Kharai Camel**, probably the only domesticated animal species that lives in dual eco-system. **Kharai Camel** is considered as unique **Eco-tonal species** as it survives on dry land ecosystem as well as coastal ecosystem. **Kharai Camel**, perhaps first such kind of camel which swims through sea water and reach bets in creeks in Gulf of Kachchh. This breed can swim more than 3 km in search of mangroves for grazing. The males of this breed are used for draft purposes throughout and even outside Gujarat state, while the females are used for milk purposes.



Distribution of Kharai Camel breeders



The Jat & Rabari communities are mainly engaged in raising the Kharai Camels. While the Rabari community has confined itself to the two talukas of Kachchh, i.e., Bhachau & Mundra, the Jats have spread across Lakhpat & Abdasa talukas in Kachchh and in various coastal areas of Bharuch, Vadodara, Anand, Ahmedabad & Bhavnagar districts due to availabality of mangroves in toto, 104 breeders from 21 villages in 11 talukas of the state raise more than 4000 Kharai Camels by maintaining typical feeding habits of this breed. (Table-1)

Table 1. Distribution of Camel Breeders and Kharai Camel Population

Sr.No.	District	Taluka	No. of Camel Breeders	No. of Villages	Camel population (*)	Caste /Community
1.	Kachchh	Lakhpat	13	4	560	Fakirani (Jat)
		Abdasa	12	4	575	Fakirani (Jat)
		Bhachau	43	1	788	Rabari
		Mundra	4	1	250	Rabari
2.	Bharuch	Vagra	11	2	995	Fakirani (Jat)
3.	Vadodara	Pad ra	1	1	50	Fakirani (Jat)
		Jambusar	2	1	50	Fakirani (Jat)
4.	Anand	Khambhat	8	3	270	Fakirani (Jat)
5.	Ahmdeabad	Dholka	2	1	72	Fakirani (Jat)
		Dhandhuka	7	2	455	Fakirani (Jat)
6.	Bhavnagar	Bhavnagar	1	1	45	Fakirani (Jat)
Total	6	11	104	21	4110	2

^{*} Indicates the Kharai camel population, estimated from discussions with camel breeders





Rearing Practices

Extensive grazing practices are followed by the breeders for Kharai Camel in the district. They do not provide special housing/shelter for their camels. Generally, during monsoon, *Kharai Camel* stays in bets for 2-3 months at a stretch as sweet water is available in bets as rainwater store. In summer and winter *Kharai Camel* are taken to bets near creeks for grazing on mangroves for 2-3 days and then returning animals to the mainland for watering of camels. During low tide, adult camels walk through the sea water while young ones swim through, while during high tide, both adult and young camels swim in deep sea water. Besides, mangroves, *Kharai Camel* feed on other saline trees, shrubs and grass species like *kharijar* (Salvadora persica), Lano (Suaeda spp) near village *simtal*, moving around 10-15 km, on a rotation basis in order to avoid overgrazing. Ponds, wells and village cattle troughs are the main sources of water. An adult camel requires 20-40 litres of water per day. Generally, the watering time is 12-3 p.m. as per availability and based on the source's distance from the grazing area.



Breeders follow natural breeding practices for this breed. Breeding males are changed every **3-4** years and new males are brought from outside herds to prevent inbreeding. Selection criteria for breeding bull followed by breeders include well-built body, hump thickness, body colour, thin skin, long and thin leg, size of chest pad, scrotum position, length and development. Most of the Kharai camel breeders neither provide medicine nor take prophylactic measures for their camels and as a result serious health problems spread among Kharai Camels. Trypanosomiasis, Manze/skin infection, arthritis, gastrointestinal problems, abortion and some respiratory infections are the most prevalent diseases.

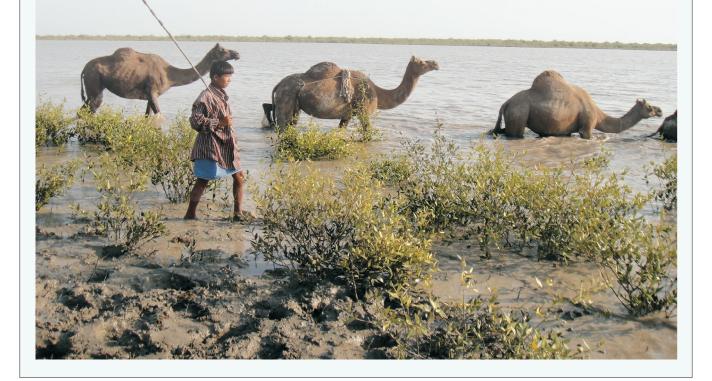






Special features of Kharai Camel

- It is Eco-tonal breed as they survive on dry land ecosystem as well as coastal ecosystem
- Swimming in sea water
- Less affected by common skin disease(Khaji/Dermatitis)
- Excellent feeding and digesting of saline trees and shrubs
- This breed can tolerate water with high TDS (total dissolved solid) up to 10000 ppm
- Short chest pad does not touch humerus of fore legs during walking
- Smooth and long hair can be used for preparation of soft cloths/stoles



Apart from the difference in habitat and feeding habits, the Kachchhi and Kharai breeds also diverge in terms of physical characteristics (Table 3). Kharai camels produce less of milk, but with higher fat content. Likewise, wool quality differs between the two breeds, as the hair of Kharai camels is longer and softer.

Table 2. Comparison of Kachchhi and Kharai Camel

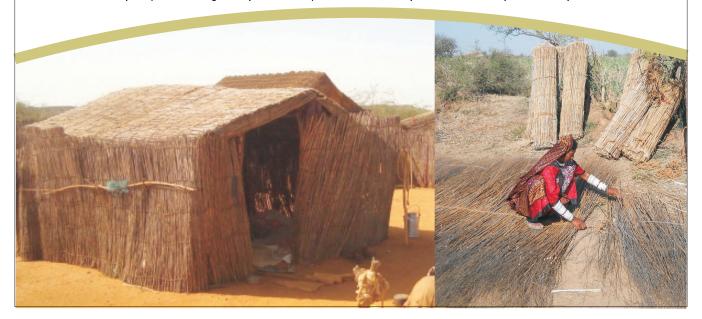
Physical Characteristic	Kachchhi Camel	Kharai Camel		
Body Size	Large	Medium and slightly round back side		
Head	Medium to small	Large		
Neck	Thin	Thick		
Ear	Erect ears with tip terminating and less wool on ears	Erect ears with tip slightly curved inside and more wool on ears		
Chest pad	Large and wide	Small and Short		
Body Color	Dark brown or red to dark red and minor in black or grey	Mostly brown-white mix (Chavaro) and Dark black		
Leg	Large and slightly thick	Large and thin		
Foot pad	Large	Medium		
Tail	Short	Short		
Udder shape	Bowel , Round and Pendulous	Bowel , Round and Pendulous		
Teat	Tube or Funnel	Tube or Funnel		

Source: Field study by Sahjeevan

Socio-economic status and life style of Kharai Camel Breeders

Kharai Camel breeders' main source of income comes from the sale of young and adult camels, while milk is generally used for camel calves and consumed within the breeders' family or community. Camel wool is mostly used to prepare <code>cheko/veno</code> for the female camel, to avoid milk suckling by calves. In Kachchh, there is no market for camel milk or wool, so breeders mostly depend on camel selling. The few breeders engaged in dry-land agriculture grow crops like <code>bajara</code>, <code>mag</code>, <code>guar</code>, and <code>math</code>, and <code>zeru</code> and <code>aranda</code> in the monsoon and winter seasons, respectively. Most of the breeders are illiterate and have engaged in camel rearing for generations, though today some of the younger generation have left the trade due to lack of interest or in search of higher-income, more stable work.

While grazing their animals, Maldharis drink Camel milk and in night they consume *Bajra roti* with Camel milk. They stay in temporary huts, locally called '*Pakkha'* that are made of grasses, like *Lampdo (Celosia argentia)* and *Ekad (Sesbania sesban)* which are non-palatable species.



They rebuild their *Pakkha* after 2-3 years of interval. Some Rabari breeders give their camels to Jats on monthly grazing charge of Rs. 30 to 50 per camel or based on income from selling of male calves in a year. Most of the breeders receive money on credit at interest rates from 5-10% for rations, animal health care, and their own social lives. Because they only sell camels and not milk or wool products, the money they make goes back to the merchants, from whom they have extended credit, leaving them with little extra income of their own. They migrate with their animals in search of proper habitat and water in different parts of Kachchh as well as out of Kachchh in order to protect this unique Camel breed. The growth of industrial activities in the costal areas of Kachchh has further minimised the available Camel food and water sources, and salinity has increased throughout the region. Thus, the socioeconomic condition of Kharai camel breeders in Kachchh is very terrible and the government should take necessary steps to improve the situation. In modern days, when human interference with nature is considered as the main cause of global warming, these communities still follow a lifestyle without hampering natural resources too much. Their low carbon footprint in life has never been acknowledged rather being termed as primitive lifestyle.



Future Strategies

- Characterization and Recognization of Kharai Camel breed as a distinct breed of Camel
- Secure regular health services from the government to address common diseases among Kharai camels
- Establish markets for camel products (milk, dung and wool)
- Establish Self-Help Groups for women in the Camel breeding communities
- Work with banks and government to make credit available to breeders for the purchase of Camels and basic living necessities
- Ease restrictions on grazing land under Forest Department jurisdiction, so that more area is available for grazing of camels
- Encourage community based in-situ conservation of Kharai Camel and Government and other institutes should invest on that
- Linkages should be established with Research institutions, Universities and NGOs in order to increase participation of communities for development and improvement of Kharai Camel









Aliabet: A Habitat of Kharai camels

Geographically located at the confluence of the Arabian Sea and river Narmada, Aliabet is a Reserved Forest spread across 5500 hectares in Vagra Taluka of Bharuch district in Gujarat. A number of camel breeders from Kachchh had started migrating to the coastal areas of Jamnagar, Bhavnagar, Khambhat, Jambusar, Dhandhuka and Aliabet in search of mangroves for their camels hundreds of years ago, and started settling down in those areas. The Jat maldharis from Kachchh had moved to Aliabet around 250-300 years ago, when it hosted dense mangrove forests and other species like salvadora persica (Khari jar), etc. The abundance of mangroves in this area was one major reason why the Kachchhi Jat maldharis chose to settle here. Presently, nearly 100 families of the Jat camel breeders stay in Kaladhra village of Bharuch, out of which only 15 families are engaged in their traditional occupation of camel rearing with 995 camels, and others have diverted towards keeping cattle and buffalos. It is noteworthy that the population of Kharai camels in the state is more than 4000, out of which around 2200 are found in Kachchh district, while nearly 2000 Kharai camels are found in other coastal areas of Gujarat (Table 1).

The decline in number of families keeping camels is attributed to the decline in mangrove forests in Aliabet. Due to the change in river Narmada's course in the last 20-25 years, sweet water does not enter into the area, resulting in the decline in mangroves and other tree species. Though there are sufficient mangroves in the coastal areas surrounding Aliabet, the camel breeders are denied access to those areas.

Camels at Aliabet









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