

# KHARAI CAMEL

## Breed Registration Process



**C**amels are called the ship of the desert, but the Kharai camel, a breed native to Kachchh, is much more than that. The Kharai camel is equally dependant on terrestrial and marine ecosystems. It lives on land, but swims to small islands in the sea to feed on mangroves and other saline plant species.

The process of registering the Kharai camel as a distinct Indian breed is currently underway. The activities undertaken to prepare a profile of the breed are highlighted in this document.

Prepared by



Supporters



Published : May' 2014

# Kachchh Camel breeders association

In 2009 Sahjeevan with the support of Department of Animal Husbandry, Govt. of Gujarat initiated a project on “Mobilizing Camel Breeders' Towards Organizational Structure” under the centrally sponsored scheme called “Conservation of Threatened Breeds”. Sahjeevan facilitated camel breeders to organize them to raise their issues and negotiate with the states to



look upon those. Kachchh Unt Uchherak Maldhari Sangathan (KUUMS) was formed in 2011 when it was registered under Society and Trust Act with 350 camel pastoralists becoming members of KUUMS. The Executive Committee consists of male and female representatives from each taluka. Main objectives of KUUMS are

- Conservation, protection and restoration of Grazing areas which are traditionally being used by Camel Pastoralists
- Establish linkages for marketing of Camel Milk and other camel products
- Recognize Kharai Camel as distinct breed
- Ensure health care facilities for camel
- Conservation and improvement of Camel breeds
- Show case their pastoral life style

Till date, KUMMS has become a power full body among camel pastoralist to develop linkages with states. Kharai camel breed has been recognized as distinct breed by ICAR in 2015. Due to efforts by KUUMS along with government camel milk has been considered as food item by FSSAI, Government of Gujarat has sanction Rs. 3 caror for camel milk dairy and Amul has start camel milk dairy in Gujarat.

# Project Launch

Kachchh Unt Uchherak Maldhari Sangathan (KUUMS, the Kachchh Camel Breeders Association) was registered under the Indian Society and Trust Act in 2011. The project on Documentation and Registration of the Kharai Camel breed was launched on June 22<sup>nd</sup> 2013, at the KUUMS Annual Meeting, on the occasion of World Camel Day.

The project is supported by the Food and Agriculture Organisation of the United Nations (FAO). Kharai camel breeders, representatives from the dairy sector and the Department of Animal Husbandry, Gujarat, as well as some biodiversity experts, attended the launch. A project brief was launched concurrently.



# Activities

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## • Population Estimate

Sahjeevan and KUUMS carried out population estimations of the Kharai camel population in Kachchh. Sahjeevan also collected data on the population of Kharai camels in Bharuch, Bhavnagar, Ahmedabad, Anand and Vadodara districts of Gujarat.

## • Socioeconomic Surveys

Socioeconomic surveys were carried out in the households of 25 Kharai camel breeders, in 8 villages across 4 talukas in Kachchh.

*The surveys covered a range of topics, including:*

- Lifestyle
- Economic circumstances
- Literacy rate among herders
- Land holdings, if any
- History of the Kharai camel
- Relationship between the Rabari and Jat communities
- Herd size
- Herd management
- Breeding practices
- Feeding and watering practices
- Indigenous traditional knowledge of natural medicines

### • Preparation of the Breed Descriptor

Cluster level meetings were held with camel herders in Bhachau, Lakhpat, Abdasa and Mundra talukas. The project was introduced and a plan was drawn up to select animals for tagging.

The breed descriptor is based on data collected from 105 pregnant female Kharai camels, which were selected and tagged with a specific tag number. These camels were selected from 15 Kharai camel herds, belonging to 23 camel breeders.



## • Physical Characteristics

General physical characterization data was collected using 3 separate data sets. Within these, adult camels are those aged over 4 years. Calves are under 4 years old.

1. **DATA SET 1:** 100 adult female camels

**PARAMETERS:** body size, coat colour, muzzle, eyelids, tail switch, footpad colour, forehead shape, udder shape and size, teat shape, teat tip.

2. **DATA SET 2:** 152 camels – 72 adult females, 6 adult males (adults >4 yrs old), 42 male calves, 32 female calves (calves <4 yrs old).

**PARAMETERS:** Hair on ear and eyelid, hair length, head size, depression above eyes, forehead, muzzle and lips, chest pad, hump size, size of milk vein (measured on a subset of 39 female adult camels), neck length, distance between eyes, length of fore leg and hind leg, length and width of footpads.

3. **DATA SET 3:** 158 camels – 100 adult females, 8 adult males, 50 calves under 1 year of age (25 male, 25 female).

**PARAMETERS:** height at wither, body length, chest girth, hump girth, paunch girth



Red/Dark red female camel



Dark brown male camel



Light brown Kharai camel calf



Ear length measurement



Hump girth measurement



Measuring the distance between the eyes

- **Birth weight of Kharai camel calves**

Data was collected from 34 male and 34 female calves using a weighing bag attached to a spring weight balance.



- **Weight of Adult Camels**

Adult Kharai camels were weighed on a truck weighbridge.



An adult Kharai camel is weighed at Samakhiali Weigh Bridge in Bhachau taluka

• Dairy performance

To facilitate data collection on dairy performance, the owners of the selected camels were given a milk-measuring cylinder and milk recording cards. They were instructed to record the dairy production of each tagged camel 3 times per month at intervals of 10 days, for the duration of the lactation period.

Dairy performance was measured using data collected from 105 adult females. The information recorded included daily milk yield, peak milk yield, length of lactation period and lactation milk yield. Fat percentages and Solid Not Fat (SNF) percentages were recorded using data from 113 milk samples that were tested by Sarhad Dairy.



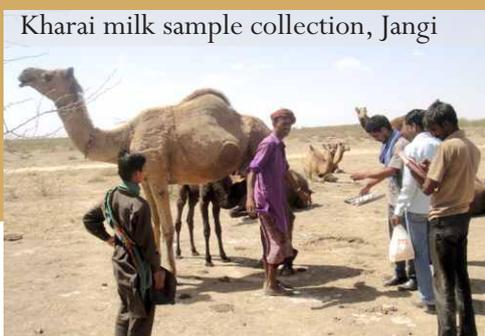
Milk Recording Card distributed to Kharai camel breeders



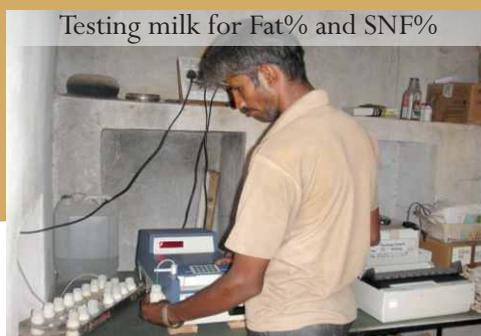
Discuss use of milk measuring cylinder



Kharai milk sample collection, Vondh



Kharai milk sample collection, Jangi



Testing milk for Fat% and SNF%

## • **Reproduction & Hair production parameters**

Reproduction & Hair production data was collected through structured interviews with 50 camel breeders who keep Kharai camel herds. The data and information collected included:

- Age at first mating (male and female)
- Age at first estrus
- Estrus cycle duration
- Age at first calving
- Calving interval
- Age at clipping
- Weight at clipping



Rutting male Kharai camel



Kharai camels in mating position



Female camels cocking their tails as a sign of pregnancy

- **Hair growth analysis**

Hair length and hair diameter were recorded from 13 samples of camel hair. The Wool Analysis Laboratory, Sheep Breeding Farm, Morbi, carried out measurement and testing.

- **Molecular characterization study**

The Anand Agricultural University in Anand, Gujarat, carried out a molecular characterization study of the Kharai camel using blood samples collected by KUUMS and Sahjeevan.

- **Interviews with Kharai camel breeders**

Three Kharai camel breeders were interviewed about the breed. The interviewees were Bhikhabhai Vaghabhai Rabari, Agakhan Savlani Jat and Nasibibai Shermamad Jat. All interviewees stressed the uniqueness of the breed and the importance of conserving it.

## Awards and Recognition

The National Biodiversity Authority awarded two Kharai camel breeders, Adam Abdrehman Jat and Amad Varindh Jat, with the **Breed Saviour Award for 2011** for their work with their herds of Kharai camels.



## Kachchh Unt Uchherak Maldhari Sangathan

- Mr. Bhikhabhai Rabari
- Mr. Amad Varindh Jat
- Mr. Adam Abdrehman Jat
- Mr. Musa Gulu Jat
- Mr. Jumabhai Rabari
- Mr. SatarValu Jat

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