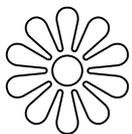
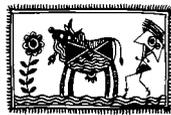


# BREED SAVIOUR AWARDS 2010

Profiles of Livestock Keepers



SEVA



LIFE Network



National Biodiversity  
Authority



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## Preface



राष्ट्रीय पशु आनुवंशिक संसाधन ब्यूरो  
**NATIONAL BUREAU OF ANIMAL GENETIC RESOURCES**  
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The second round of Breed Saviour Award 2010 has been attempted by SEVA/LIFE Network in our country through an announcement of competition. Based on many entries 20 pastoralists/traditional livestock keepers have been chosen for award for the year 2010. These selected livestock keepers are conserving native farm animal breeds in their region and some of them are engaged in improving the breed through selective breeding and improved management practices. Profiles of the livestock keepers/custodians of animal breeds have been documented very well. I wish all the awardees for greater role to play in conservation of animal genetic resources. This will also help in identifying lesser known and undescribed breeds and steps will be initiated for further characterization and recognition of breeds along with the communities before the breed is getting lost. We also appreciate the National Biodiversity Authority, Govt. of India for supporting social recognition of breed conserving communities or livestock keepers and able to join hands with LIFE Network volunteers in this initiative.

The importance of livestock biodiversity, local communities and food security is also emphasized in the recently concluded Nagoya Protocol on Access to Genetic Resources and the fair and equitable sharing of benefits arising from the utilization to the Convention on Biological Diversity “acknowledging the potential role of access and benefit sharing to contribute to the conservation and sustainable use of biological diversity, poverty eradication and environmental sustainability and there by contributing to achieve Millennium Development Goals”.

  
[B.K. JOSHI]



## Acknowledgement

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Article 8(j) of Convention on Biological Diversity (CBD) recognises indigenous knowledge. Under Access and Benefit Sharing regime of CBD, it proposes incentives for communities conserving genetic diversity. In this regard SEVA in association with LIFE Network supported by National Biodiversity Authority has presented Breed Saviour Awards 2009 to 24 pastoralists / breeders associations from different states for their efforts and achievements in the conservation of local livestock breeds on 8<sup>th</sup> October 2009. Now, during this year we are presenting Breed Saviour Awards 2010 to 20 pastoralists / livestock keepers on 8<sup>th</sup> December 2010 at a workshop on “Community Conservation of Local Livestock Breeds” at Madras Veterinary College, Chennai.

Breed Saviour Award is one of many activities of LIFE Network i.e. promoting breeders’ associations, Livestock Keepers’ Rights (LKR), breed documentation and community Bio-Cultural Protocols (BCPs) for livestock keeping communities, marketing niche products from local breeds, networking, training, capacity building and advocating holistic conservation approaches which preserve all components of biodiversity, wildlife, local livestock breeds, ecosystems and traditional wisdom.

We are thankful to National Biodiversity Authority for extending financial support for distributing awards to pastoralists, NABARD, Chennai and Department of Animal Husbandry, Dairying & Fisheries, New Delhi for likely supporting the workshop expenses, National Innovation Foundation for documenting indigenous knowledge, LPP for preparation of community protocols of livestock keeping communities, Tamil Nadu Veterinary & Animal Science University for hosting this event and LIFE Network members for documenting and other logistics arranged for the livestock keepers who receive awards on this occasion. We look forward for our continued association in order to promote socially inclusive and ecologically sustainable livestock farming in tune with nature.

**P. Vivekanandan**

Executive Director



## Kankrej Cattle

*Conserved & Improved by Jat Achar Hajihussain*

Address of Livestock keeper

: **Jat Achar Hajihussain**  
Rabhuvand, Sharada village,  
Banni, Bhuj, Kachchi. Gujarat.  
Mobile : 0 94298 10091



### Family background

Jat Achar Hajihussain (46) belongs to Jat caste in Muslim community. He has 10 children and only 2 boys are educated upto 5th standard. He has 225 cows. In that 160 are young, 40 are adult and 25 are calves. He has 3 bulls. In that one is 6 year old, second one is 3 year old and third one is 1 year old (preparing for breeding). His sons help in grazing and raising animals while girls make mava (milk product) from cow's milk. He lives with 12 of his family members in Kacha house. During drought or even in stress period he will leave his family behind and migrate to Rapar taluka, 200 km. away from his native, in search of feed for animals. After spending 2-3 months in Rapar, he comes back to his native during rainy season.

### Details of Breed Conservation

Jat Achar Hajihussain is from Sarada village of Banni region, conserving indigenous cattle breed mostly Kankrej cattle, generation after generation. His family has been keeping such cattle for more than 175 years ("I remember only 7 of my family generations involved in cattle rearing" says Jat Achar Hajihussain). He still remembers past golden days, when cattle population (90%) was higher in Banni region which is now reduced. Only 10% population is left in Banni now because invasion of *Prosopis* population has decreased in the area. When most of the livestock keepers in Banni region shifted to buffalo rearing, he is still following his family tradition in conserving indigenous cattle breeds. Presently he has 225 animals (160 young, 40 adult and 25 calf/heifer) and raising them in extensive system. He keeps animals not only for milk purpose but also for selling bullocks. He has been maintaining true blood line of 18 cattle, and every blood line has unique name, like Munjhhel, Kavri, Lakhmi, Bhuri, Kaber, Janjri, Rosy, Teliha etc. The offspring of one blood line carries the name of the mother, for example, female calf of Lakhmi will carry the name of Lakshmi. During stress condition, they usually migrate not only in other places of Gujarat but even upto Maharashtra. In 1987, when Kutch faced severe drought, he migrated with his 150 animals to Maharashtra where 80 animals died. In that year quality of his animals also deteriorated. After coming back he worked on selection of bulls and now, not only he increased his animals to 250 but quality of his herd also improved considerably. He is keeping 3 bulls for breeding of animals. Bulls are changed in every four years. He keeps different bulls for animals used for milking purpose keeping in view of qualitative traits and physical traits. Separate bulls are kept for animals which are used for draught purpose. Out of 200 animals, 40 are pouring milk today.

Breeding Practices : Natural Service is followed for breeding. No Artificial Insemination is ever done. For selection of bull for natural service following criteria are considered : dam milk, well built body; walking pattern, small head, good looking.

Traditional Practices followed :

for Pitto : Jeggery, salt and turmeric mixture is given to animal.

for Fracture : Make a charcoal from the stick of kherdo and powder it and then mix with ghee/milk and make a laddu and give up to 10-15 days.

F.M.D : To apply sarsiu oil in mouth and salted water on foot.

After facing a bad experience in losing 80 animals out of 150 in 1987, now, he is having 250 animals. It is possible because of two reasons, which are his faith in his breed and knowledge who got from his ancestors. Selective breeding bring back qualities of his animals whereas, grazing system followed in Banni region helped him to increase the number of animals. Every year he sells around 15-20 young male cattle to animal traders at Rs.1000/- per animal which in turn sold to farmers for farming purpose. He also sells good quality mava 150 kg a month @ Rs.70-80 per kg, to market at Bhuj.

### **Background Information on Kankrej cattle in Banni grass land of Kachchi**

In 1961, Kankrej cattle population was 48,000 in Banni (Census of India 1961, Vol. V, Part VI, No.3 & 4, by R.K. Trivedi, Superintendent of Census Operations, Gujarat) which now came down to merely 12,000 in Banni region. Why this has happened?

There are 5 reasons :

- 1) In midsixties, forest department planted exotic species viz. Prosopis juliflora through arial spread of seeds in order to develop greenery in Banni as well as to check ingress of salinity. This backfired, as Prosopis could not check salinity ingrees, but alkaloid in leaves of prosopis hampers the growth of other grass species around the plant and invaded all over the region.
- 2) Pods of Prosopis is not digestible to cattle (however, buffalo adopted to Prosopis pod) and cattle started dying. Therefore, maldharis were quick to response to the ecological hazards, which was man made, and then started increasing buffalo. In 2010, buffalo population became 40,000, therefore, 80% of animals in banni is Banni buffalo, and 15% is cattle, whereas, the situation was exactly reverse in 1961.
- 3) During mid 60s, after introduction of modernisation in agriculture to realize green revolution, tractors came in Saurashtra region, started replacing bullock power. Therefore, demand of Kankrej bullock (which was known for its Sawai Chal, i.e, when bullocks walk back leg is put little above the front leg, that's why it is called Sawai, means one and one-fourth) which can plough more than other breed, farmers used to say, Kankrej bullock can plough 25% more than other bullock.
- 4) When white revolution initiated in Gujarat in early 70s, demand of buffalo strated increasing due to the fact that, fat become the factor for calculatoin of price of milk, and banni buffalo, for its high fat percentage was preferred over cattle from the Banni region.
- 5) In late 60s and early 70s, 7 minor irrigation dams were built in the mainland of Bhuj ridge to boost agriculture, stoping water inflow to banni region, from seven seasonal rivers which used to flush out salinity of banni grassland as water flown out to Greater Rann of kutch reducing salinity, therefore, increase grass productivity of banni grassland. Due to construction of dams, that phenomenon just reversed.

The grassland degraded due to invasion and Prosopis demand of cattle decreased, but still, few maldharis of banni continue to safegaurd this breed, even after facing lot of ecological and market disadvantages. State could not recognize contribution of these pastoral community for conserving Kankrej cattle in adverse condition.

Now maldharis of banni are conserving and continue selling around 10,000 bullocks, Kankrej cattle to Saurashtra every year (bullock trade is a traditional relationship between maldharis and farmers). A tale of Hindu-Muslim brotherhood even today when many news of conflict between farmers and maldharis come out due to grazing and encroachment of gauchar land.

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## Vechur Cattle

### *Conserved by Brahmadathan in Kerala*

*Address of Livestock keeper* : **M. Brahmadathan**  
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Mobile : 0 94473 06635



#### **Family background**

Brahmadathan Pattambi is a farmer engaged in rearing of Vechur cows since last 14 years. He is a keeper of Vechur cattle and has maximum number of cows since the beginning. He sells animals to friends in the Vechur Conservation Trust. He has now six cows and three calves with him.

#### **Details of Breed Conservation**

Among cattle, Vechur cows were considered as the pride of Kerala. These animals derived their name from the village of origin, Vechur, a small place by the side of Vembanatu Lake near Vaikom in Kottayam district of central Kerala. The Travancore State Manual of 1940 by T.K. Velu Pillai has a particular mention of Vechur cows. Vechur cattle were very popular and available in large numbers in Kottayam, Alappuzha and Ernakulam districts about half a century ago.

These cattle are small in size with an average weight of about 130 kg for cows and 170 kg for bulls, and height below 90 cm. The animals have solid colour: red, black and sandal white are commonly seen. The hump is present and tail almost touches the ground. The lightweight strong bulls were commonly used for ploughing the marshy paddy fields. The adaptability to the hot humid environment and low feed requirement are some of the good qualities of the cows.

However the farmers' preference to the cow had been due to their relatively higher milk yield. The yield is 2-3 kg per day. The milk of Vechur cows was considered having high medicinal value and is extensively used in the Ayurvedic system of medicine. Grading up of the local cattle with Red Sindhi was the Kerala government policy in the 50s.

The policy of massive crossbreeding with exotic breeds pursued since the 60s transformed the local animals including Vechur to crossbreed throughout the state. Local bulls were not permitted to be retained as per Kerala Livestock Act, 1961. However temple bulls were exempted from this. The government policy, coupled with a cultivated preference of the farmers for crossbreed cows yielding more than double the milk of local cows in the first generation itself, led to the near extinction of the Vechur cows. Its population is approximately 1700.

Due to the Government policy of massive cross breeding with exotic breeds and compulsory castration of native bulls, Vechur cattle reached a stage of near extinction. Conservation work was started in the Kerala Agricultural University, Thrissur in 1989 by Dr. Sosamma Iype, the then Professor of Department of Animal breeding and Genetics. The Vechur Conservation Trust which is an association of conservationists, environmentalists and others interested in Vechur cattle now coordinates the activities in the field. Breeding in the field is looked after by the Vechur Conservation Trust. The Conservation of the breed in the field is mainly by farmers interested in the vechur cows who have a conservation attitude. They have preference for native animals which do not need any sophisticated management. Heat tolerance of the breed is another attraction of the breed. Pure fresh milk adds to the food security in the houses.

The facilities for pure breeding were unavailable to the farmers, which was the major impediment for keeping Vechur cows. It was here the Vechur Conservation Trust stepped in with a germplasm centre in its home tract having breeding facilities and thus doing the in-situ and ex-situ conservation of live animals and germplasm.

Brahmadathan practices pure breeding in the herd. Breeding males are selected based on good pedigree and phenotype and breed characteristics. Females are selected according to their phenotype, mainly milk production.

A semi-intensive system of management is practiced mostly. Vechur cattle require very little sophistication in their management. They are fed with left over from the households. Open grazing is also practiced. Grass grown under rubber trees is also used for grazing. Straw and other byproducts from paddy cultivation is another source of feed. Nonedible parts of seasonal vegetables and fruits like jackfruit, small and large varieties of banana, pineapple, mango and others contribute to the roughages in a big way. So feeding is not an expensive affair for him. Oil cakes and bran available are also given to the cows. Grazing in the farm and seasonally in paddy fields is practiced.

### **Indigenous knowledge in relation to animal breeding**

Vechur cow milk is in high demand all over Kerala due to its high nutritional quality along with easy digestibility and medicinal value. Vechur cow milk is used for Ayurvedic medicine preparation. Flushing the eyes with Vechur milk cool the eyes and give brightness to the eyes. Milk is a good treatment for minor ailments of the eyes and along with certain herbs for more serious ailments. The dung and urine of Vechur cows are highly sought for organic cultivation. It is believed that milk of black colour cows is the best. The chocolate coloured animals are rare. But they are preferred for pooja in certain areas. Offering of animals to the temple is considered as sacred and it brings prosperity in the house. Christians make the offerings to the churches from where the animals are auctioned.

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## Garole Sheep

*Conserved by Smt. Namita Mondal*



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PS - Sagar Island  
Dist. South 24 Parganas,  
West Bengal - 743 373  
Mob: 0 93781 69769

### Family background

Garole sheep keeping is the traditional livelihood for Mondal family for generations together. They are marginal farmer with 0.3 acre of land. However being located in coastal island crop often get damaged by storm and saline water inundation. But Garole sheep can withstand these vagaries and a dependable source of livelihood. Mondals are "Poundrab" by caste which belongs to scheduled caste group. Smt. Mondal (40 years) is educated up to 8<sup>th</sup> standard. She has one son and two daughters.

All are in school at different level. They are almost restricted within the island but occasionally visit relative house in other islands and mainland. On an average adult flock size is 17 round the year consisting of one or two males and rest are females. Surplus animals are sold to middlemen right at their home. Droppings are good manure for crop field and kitchen garden. Garole sheep is almost like savings bank account to Mondal family for meeting all family exigency and emergency.

### Details of Breed Conservation

Garole sheep is maintained by the Mondal family for generations together. Simple housing made up of mud, bamboo, thatch, earthen tiles and plastic sheet is used as night shelter and rain and hail-storm protection. Garole sheep has virtually been rediscovered twenty years back. Though as early as 1792-93 the breed was taken to Australia to incorporate prolific gene to Australian Merino. Recent investigation has established that almost all prolific sheep breeds of the world are genetically linked with Garole.

They are mutton type with coarse hairy and open fibre. Fleece colour ranges from white to completely black with number of intermediate tones. However there is no practice of shearing Garole sheep. They are non-migratory in nature but are managed on tethered or free grazing at the vicinity (within one kilometre) of owners' residence.

There is no practice of concentrate feeding except handful of crop residue, rice gruel and kitchen waste. The breed is considered a biological marvel in mammalian reproduction. They are resistant to parasitic infection and adapted to grazing in knee-dip water. Degradation of the ecosystem and opposing market force are acting heavily against the breed.

The problem is so acute that keepers these days prefer non-prolific. Garole to cope with shrinking natural resources. As a consequence the breed has suffered enough degeneration leading to diluted genetic quality. Population size of true to the breed' is reducing, requires needing planned effort for conservation.

Mondal family is engaged in not only maintaining this breed, but they carry out selection in every generation by keeping the best animals as breeding stock based on lambing size, lambs' survivability and growth rate. She earns a profit of of Rs.8000/- through sale of lambs annually. Present population of Garole sheep is about one lakh in this area.

Mondals are progressive Garole keeper and are known in the area for their better stock. They keep close liaison with Veterinary and Animal Husbandry department for better management of their stock. Smt. Mondal has undergone training under Government department. They know all tit-bits of modern sheep keeping viz. deworming, vaccination and lamb management.

Besides supplying quality Garole lamb to local keepers, they also help other keepers in specialized services like treatment with indigenous knowledge. She uses couple of herbal therapies. Safeda, a local fruit is drenched in cases of diarrhoea. Haldi and common salt is used for treatment of wound.

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## Kankrej Cattle

*Conserved by Halepotra Gulhasan Moheb*

Address of Livestock keeper : **Halepotra Gulhasan Moheb**  
Sadai village Banni, Bhuj,  
Kachchh, Gujarat.



### Family background

Halepotra Gulhasan Moheb is 45 years old Pastoralist and his sub-caste is Halepotra of Muslim community. His wife's name is Rahima. He has 6 children and all are boys. In his family only 2 boys are educated upto 5th standard. His sons are helping him in grazing and raising animals. He is keeping 200 cows, including 75 calves/heifers and 3 breeding bull.

**Migration** : Due to non availability of grass, he has to migrate outside of Banni for 8 months and then return during monsoon. When he migrates from Banni, he leaves behind his milch cows with his friends, who take care of them in exchange of the milk from his cows, while he carry on with non-mulching animals. During rainy season, when he comes back to his village and brings back his cows which he left behind.

### Details of Breed Conservation

They have been conserving indigenous cattle breed viz. *kankrej* cattle for several generations. His family has been keeping such cattle for more than 75 years. His father is known as one of the best traditional healers in this region, locally called *Bhagiya*. Presently he has 200 animals in which 40 are milch cows. He has been keeping animals not only for milking purpose but also for selling bullocks. He has maintained true blood line of 17 cattle and every bloodline has unique name like Rai, Muzel, Dhol, Kaber, Mor, Vadhan, Rozy, Shamli, Bhuri, Kali, Makel, Zalar, Mather, Bangi, Lakhi, Vanzar, Jer, etc. The offspring of one blood line carries the name of the mother, for example, female calf of Bangi will carry the name of Bangi. Out of the above mentioned breeds, Zalar and Jer produce more milk, up to about 15 litres. Last year he sold 15 cows, approximately @ Rs.9,000/- per cow and 10 calves @ Rs.1,000/- per calf.

**Role of forefathers in use of Kankrej breed** : During the time of his forefathers, consumption of *Ganda Baval* Prosopis juliflora fruits by cows began and it adversely affected their health. As a result many maldharis stopped rearing cows and preferred buffaloes instead. But his forefathers did not give up and continued rearing Kankrej cows with determination. His family continued rearing cows, did not switch over to rearing of buffaloes, even in difficult times. He has almost 200 cows and to provide feed during non-monsoon, lean season for fodder he migrates for eight months at a stretch.

**Value addition of products in marketing** : In time of monsoons, when amount of milk collected in a day reaches a peak of about 100 to 150 litres, they make and sell *mava*. About 7 kg is sold in a day @ Rs.70/- per kg.

### Traditional Practices followed

- for Pitto : Jaggery, salt and turmeric mixture is given to animal.
- for Tapaliya : Henna is applied on affected areas as treatment.
- for F.M.D : Mustard oil is applied inside the mouth and salted water on foot.

Breeding practices : Breeding through natural service only being practiced by him; he is keeping 1 breeding bull / 70 cows; breeding bull are used up to 8-10 year of age; breeding males are exchanged between nearby villages after 3-4 years regularly to avoid inbreeding.

Knowledge about grasses : Good quality grasses are being grown at Gorewali to Hodka grassland. In Mithadi to Dumado, Sarada and Hodko grassland, good quality grasses are grown in monsoon season. There are various grasses available viz. maghanu, sau, denai, khevai, chidyo, karoi, lambh, gandhir, oin, etc.

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## Kachchi Camel

*Conserved by Jasha Deva Rabari*



Address of Livestock keeper : **Jasha Deva Rabari**  
Tunda Vandh,  
Mundra, Kachchh, Gujarat.  
Mobile : 0 97269 04561

### Family background

Jasha Deva Rabari is 55 years old and has two children. Not formally educated. They depend on traditional wisdom for camel rearing. His sons also help in grazing and raising of camels.

He has 115 camels - 30 young ones, 70 adults and 14 calves. He also has one breeding male camel. They belong to Rabari community. Members of this community are also famous by the name Bhopa.

He lives with family members in Tunda Vandh in Mundra taluk and follow every Hindu ritual. He is totally dependent on camel rearing and some camel products like selling of camel milk, wool items and selling of young camels. During stress period in summer and winter, he has to move to nearby areas with camels in search for fodder and water for them. Now due to heavy industrialization in Mundra taluk, they are struggling for grazing lands but continuously follow the profession as camel rearing since last few decades.

### Details of Breed Conservation

Jasha Deva Rabari is conserving indigenous camel breed of Kachchhi breed and his family has been conserving this for many generation. His ancestors had been keeping the breed of camel for more than 100 years as he remembers that 3 of his family generations involved in camel rearing. Earlier camel population was higher in Tunda Vandh. This area camels mostly depend on mangrove feeding and this is good for them but now this feeding source is reduced and so the camel population is reducing day by day and only few population are left in this vandh due to heavy industrilization. Most of the camel breeders were migrated or sold their camels in serious condition. But Jasha is still following the family tradition in conserving indigenous camel breed and become stable at this village with camels for the last four to five decades. Presently he has 115 camels and raising in extensive production system. He uses camels not only for selling purpose but also for milk and wool purpose. He has maintained true blood lines of his family camels. The offspring of one blood line carries the name of the mother. The bull he keeps for breeding purpose is changed every four years to avoid inbreeding in his herd.

### Breeding Practices

- Natural service is followed for breeding. No Artificial Insemination is ever done,
- Selection of breeding bull based on following criteria :  
dam milk, well built body, height, particular colour, small and thick leg, hump thickness, scrotum and penis position and size.

## Traditional Practices followed by Jasha

Sl. No	Name of the Disease/Ailment	Traditional Practices
1	Rop	Give mixture of ash of fire dung and camel milk
2	Fracture	Make a charcoal from the stick of Kerad and mix with ghee/milk and make a ladu and give up to 10-15 days.
3	<i>Bant</i> / Respiratory problem	To give onion and Kuvarpanthu

After losing many camels in common camel diseases like Fitoda and Dermatitis, now he has 115 camels. He has a strong faith in this breed and in indigenous traditional knowledge which he learnt from forefathers. He follows selective breeding to bring back desirable qualities of the animals and follows rotational grazing system. This has helped him to increase the number of camels so that every year he is able to sell around 7-15 camels to camel traders in the price range of Rs. 8,000 to 15,000 per animal which are further used for transport, agriculture and milking purpose.

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## Katchakatty Black Sheep

### *Conserved through Sheep Breeders' Association*



Address of Association

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Katchakatty Village & post - 625 218,  
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#### Details of Sheep Breed

Katchakatty black sheep is being maintained by sheep herders in villages viz. Katchakatty, Bodinayakkanur, Kulasekarankottai, Viralipatty, Vadipatty in Madurai District. The Katchakatty black sheep is known for fighting quality. It is procured to use for sports in villages viz. Ram fighting. There are 30 herds in this breeding tract and the present population is about 1200.

Katchakatty Black sheep are maintained in small flocks. The animals are medium in size, compact body and colour of hair is complete black. The breed is identified with different type's viz. *Mooliadu, Sonaiyadu, Ilaikathadu, Kenambadu* based on size of ear and horn in ewes. The animals are well known for ram fighting during village festivals or sports. The breed is amenable for penning in farmers fields and it contributes manure in enriching soil fertility and growth of crops like sorghum, groundnut, bajra, maize, sugarcane, paddy and vegetables.

Local shepherds who depend upon sheep keeping for their livelihoods are taking them to open grazing including Vaguthumalai forests of Sirumalai hills. The presence of kettipul, sengettippul (a type of grass) and seppunnerunji (*Indigofera ennea phylla*) in Vaguthumalai hills are known for nutritious feed for sheep growth. The breed is susceptible to foot and mouth disease if animals are not taken to forests grazing during rainy season.

#### Details of Breed Conservation

Small and marginal farmers and agriculture labourers belonging to Yadavas, Dalits and Mooppars are involved in rearing of sheep. The average size of the herd is 45. In each herd they keep one or two rams. The lambing interval is during November - January. They dispose male lambs to traders in turn send them for making a fighting ram. They also earn income through sale of manure. The animals are taken for penning during night time in the agricultural field and gets income of Rs.100-120 for a herd of 100 animals.

For instance Mr.Velusamy, who has been maintaining 110 sheeps, has told that he disposes about 60 lambs and earn income of Rs.1,20,000/- per year. In addition they will get a manure value of Rs,10,000/-. The manure is being collected through bags of 50 kg. size and traders from Kerala procures it by paying Rs.30/- per bag for using them as fertilizer for plantation crops. Each day 5 bags of manure can be collected. Penning is usually is perform during February-July for a period of six months and daily they collect Rs.100/- per day during this time. For penning 1 acre field 100 sheeps are needed for camp for 5 days. The flock is looked after by two of the family members. Few farmers hand over the sheep herd to a tenant who in turn maintain animals and the income through sale of lambs is shared on equal basis. This is locally called as *varathukku viduthal*.

## Initiatives on the conservation of breed

The main issues faced by shepherds are grazing problem in forests; disease incidence (during rainy season) in the herd.

The sheep herders have been grazing their animals in Vaguthumalai forests for many generations. Tamil Nadu forest department has initiated joint forest management programme during 1997 with the help of Japanese ODA and closed the forest initially for 5 years. But till date the forest is not officially allowed to graze inside.

The disease incidence was due to lack of regular deworming and also herders do not practice any preventive treatment.

During this time Shri. Jothirengan one of shepherds in Katchakatty village has taken an initiative in forming a breeders association called "Neelamega Perumal Karuppu Adu Valarpor Sangam". The association is regularly organizing animal health camp with the help of animal husbandry department. With the help of SEVA, 6 members constructed sheep shed and 2 members procured Katchakatty black sheep breed through micro credit programme. The association also referred the forest grazing issue at District Forest Officer level for their intervention and it is still prolonging without any tangible success. Meanwhile the association is helping Tamil Nadu Veterinary and Animal Science University, SEVA and National Bureau of Animal Genetic Resources (NBAGR), Karnal for official registration of this breed.

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## Red Khandhari Cattle

*Conserved by Raju Sakharam Magar*



*Address of Livestock keeper* : **Raju Sakharam Magar**  
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### Family Background

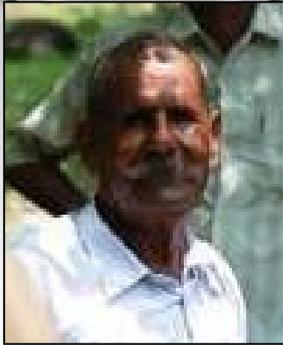
Mr. Raju Sakharam Magar is a landless labourer. He is keeping 2 Red Khandhari breeding bulls, 1 Red Khandhari cow and Red Khandhari heifers, and 1 Marathwadi buffalo breeding bull. He belongs to Matang, a dalit community.

### Details of Breed Conservation

Mr. Raju Sakharam Magar aged 28 years, has studied upto 7th standard. His family has been keeping the cattle since three generations. This breed is recently evolved and developed in Marathwada region of Maharashtra. Incumbents' grandfather started maintaining breeding bull as the source of livelihood. His main income was from natural services to the cows of that particular area. Average 200 natural services are given by the bull in a year at the rate of Rs.200/- per fruitful service. Being landless the whole family members are working as agriculture labourers in the rich landed class of the area. They are earning daily wages as well as green grasses collected during inter cultural operation in sugarcane fields, banana plantations and other irrigated crops for animal feeding. Apart from natural services huge income was earned through sale of surplus males for agricultural work / draft power. Since being a landless family they store the dung and earn income by selling to local farmers. After fulfilling the need of the family surplus milk is sold. He also participates in different cattle shows through out the year. This breed is found in Ahemadpur, Jalkot and Udgir Tashils of Latur district and also in Gangakhed loha mukhed and Kandhar adjacent to Latur district. Red khandhar is draught animal recognized by NBAGR, Karnal. The population of this breed is about 70,000 in Latur region.

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## Marwari Camel

*Conserved by Kalyan Singh Dahiya*

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### Family background

Marwari camel keeping is a traditional activity of Rajputs. They are small farmers with 10 bighas of land; Kalyan Singh, studied up to 8th std. has 40 camels, in which mostly are females and their offspring, as well as one male for breeding. They are settled agro pastoralists.

### Details of Breed Conservation

Rajputs have been keeping camels traditionally for about 10 generations. They manage the camels and treat their diseases, often with traditional medicines, but these can have limitations. They select the male breeding camels based on their looks and their ancestry. A good male camel should have the following characteristics: small mouth, small erect and alert ears, wide chest, small behind, and coming from female line of good milkers.

The population of camels is decreasing continuously, and this is due to grazing problems, closure of the forest and cutting of vegetation. The number of camels is becoming very small. Now there are only about 400 camels in Bali tehsil. At the time of his grandfather, there was no grazing problem and therefore there were also less disease problems. Overall population of Marwari camel is not known. But it is roughly around 5000-10,000 number.

The camel was brought to Rajasthan from Lanka (Pakistan) by Pabuji Rathore who lived in 14th century. This was also the same time when the first depictions of camels come up in Rajasthan art. Then slowly the Raika and Rajput started keeping camels and increased their numbers. Some other castes are also keeping camels.

He is keeping camels not mainly for profit but because his herd is the heritage of his family. The income comes from selling male camel calves at Pushkar once a year. In recent years, prices have gone up and he gets around Rs.5000/- per calf. He sells about 5-6 camels every year. But there is also expenditures from vaccinations against trypanosomiasis and hiring a camel care taker.

Earlier, camel milk was not sold. But now camel milk is for sale in the bazaar. The milk is good for diabetes patients and some other type of diseases. Now even ice cream is made from camel milk. The wool can be made into many products, including blankets, bags, durries, garments, etc. and paper can be made from camel dung.

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## Nari Cattle

*Conserved by Manaram Rebari*

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### Family background

Manaram Rebari keeps 45 Nari cows belongs to Rebari caste, has studied 9<sup>th</sup> standard and owns 1 bigha of land as well as place to live. His family members are keeping this Nari cattle breed traditionally, since at least 6 generations. They continue to conserve them into the presence.

They are kept in and sustained mostly in the jungle (forest areas) and staying there over night. Only for four months in a year, they were kept near the house. That is during the monsoon season. During his forefather time, there was no problem with grazing areas. At that time everything was open and unfenced and there were less disease problems.

They would get a good price for the male calves, but now they can't sell them, because most of the work is done by machines now.

They can sell their calves only in Gujarat. But the price has gone down very much. Presently there are no open spaces and the forest is also closed. The diseases have increased. They use plants from the forest for giving treatment. His grandfather had about 300 cows and they churned the milk to ghee. Now they are selling the milk to the dairy and also making mava.

### Details of Breed Conservation

The Nari cow originally was wild. Then gradually the Gujjar people felt close to the Nari cattle and started feeding them. Slowly the cow got habituated to people. Then the Rebari people came and also started looking after the Nari cow. Ever since the Rebari people have looked after the Nari cow and they will continue to do so.

**Breed characteristics** : The special aspect of the Nari cow is that she is very alert and protective. In the forest, if one cow is attacked, she will make noise and all the other cows will come and protect her with their horns. Nari cow also protects her owner from wild animals and attackers. If she gives birth on her own and alone in the jungle, she will protect the calf with her horns which are very long and very strong. She will not allow any wild animal to come closer by .

**Breeding bull** : The male animal for breeding (sandh) is selected on the basis of his mother's milk yield, his beauty and strong built, as well as his horns. This is what their forefathers looked for and that is what they continue to do. They take very good care of them. They learned from their grandparents. During the winter, they give them sesame oil and deshi gur, just like people did previously. Their forefathers treated diseases with herbal plants, but now these herbal plants do not exist anymore, although livestock keepers are still trying to use them. As mentioned, diseases are more frequent now.

When the animals were larger in number they were making ghee from the milk, and they sold the milk. But now they have much fewer cattle, and they are selling the milk to the dairy and make mava and selling to shops. The prices for these products are higher now. But the expenditures have also gone up. At the time of his grandfather there were lots of grazing land. Now the forest has closed and population has dwindled drastically. That's because the population has grown. Therefore there is so much problem with herding cattle. Population in the village - 500 cows; Tehsil - 2300 cows; his own herd - 45 animals.

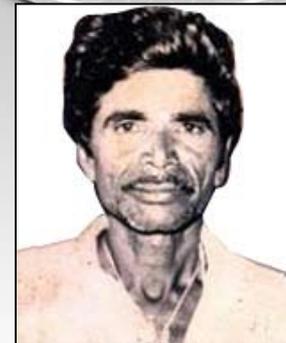
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## Bargur Cattle

### *Conserved by Kalappan*



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### Family background

Mr. Kalappan (65) is a settled pastoralist living in Thurusanampalayam of Bargur Panchayat in Erode District. He is illiterate. He belongs to Lingayat community and he is a full time Livestock keeper. He is keeping 150 cows (bulls - 6, adult cows -119, calves - 25), 20 sheep, 2 buffaloes, 5 goats. In addition he is having 1 acre dry land and raise dry land crops viz. ragi and field beans.

### Details of Breed Conservation

His family has been keeping the Bargur cattle herd for the past 4 generations. He is taking the herd in the forest area and return in the late evening after grazing them in common land/ forests. He is taking help of his 3 sons who are also assisting for grazing them as herd. During rainy season (Tamil month *Karthigai, Margali*) they usually camp them or pen them in forest area at Gergekandy, Surakkappu, Thottimaduvu.

Now a days the forest officials are not allowing them to do camping the animals in side the forests. Therefore maintaining the cattle herd is very difficult in the rainy season due to the prohibition of penning in forest area. The animals are also fed with leaves of forest trees such as Acha (*Hardwickia binata*), Echampul, Usipul (*Heteropogon contortus*) etc.

He is keeping 6 bulls. He usually selects males for breeding purpose by looking into male calves which are in good body length, red colour horn, eyes and also such calves born from second lactation mothers. The birth weight of the calves is 5-6 Kgs; 1 year old calf - 25 Kg; year old calve - 48-50 Kg. The milk yield of cow is upto 1.5 litre per day and it is usually for home consumption. The horn of calves will grow after attaining 15-18 months.

They keep the animals till 6<sup>th</sup> lactation and dispose them afterwards to the local / traders. An old animal will fetch @ Rs. 5000-6000 in turn taken for slaughter house. Annually he gets about Rs.50,000/- through sale of calves in Andhiyur village where *Kurunathar swamy* temple festival held during August. The calves are procured for work bullock or transport purpose.

During marriage of their daughters they donate one female heifer. They worship animals during the month of *Thai* (15th January) by offering *Pongal Prasad* (cooking newly harvested rice along with Jaggery).

## Ethnoveterinary Practices followed by Kalappan

**For animal dysentery :** One handful of neem bark, pepper 20 gm, garlic 6 bulblets are to be ground into a paste and mixed in lukewarm water and administered orally.

**For snake bite :** The animals are subject to frequent snake bite as they are living in close proximity of forests. Whenever animals are noticed with symptoms of snake bite they immediately administer an extract obtained from by grinding one handful of bark of *Etti* (*Strychnos nuxvomica*), bark of purasu (*Butea monosperma*) and green chillies 4 number and mixed in warm water and administered.

**Sappai disease in animals :** It is caused due to intake of poisonous grass during summer season. Symptoms of disease include swellings on legs and body region. The affected animals do not take water or feed. Animals will be dull.

**Treatment :** The bark of *porasu* tree (*Butea monosperma*) 1 handful are to be ground well and administered orally. The paste can also be used for smearing over the affected region of body.

**For abortion :** For those cows which gave birth prematurely or for abortion, the animals will be immediately administered with extract prepared from *ooncha pattai* (bark of *oonja* tree - *Albizia amara*) and few bulbs of garlic and mixed with hot water.

**For broken legs :** Bark of *Athimaram* (*Bauhinia recemosa*) and *Acha* tree (*Hardwickia binata*) are to be ground well and the paste has to be applied over the affected bone and with help of bamboo stick.

Documented by : **V. Alagumalai**  
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## Hanseel Poultry

*Conserved by Kalipada Mohanta*



*Address of Poultry Farmer* : **Kalipada Mohanta**  
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Orissa

### Family background

Kalipada Mohanta, (38) is a farmer of village Jhatipada, in tribal district of Mayurbhanj, Orissa. He is educated up to +2 level. Kalipada rears Hanseel breed of poultry for last 20 years in back yard system. While young generation people of his age go to cities to earn money, Kalipada takes up agricultural farming and backyard poultry. He breeds and rears more than 100 Hanseel birds in back yard system, out of which 20 are parent male, 40 are parent female and rear about 50 chicks at present.

Kalipada Mohanta has been awarded by local Panchayat and Agricultural Department for his involvement and dedication in poultry and agricultural farming. He regularly breeds Hanseel parent birds and sell to tribals for the past 20 years. He has constructed small poultry thatched houses for keeping birds in night to protect from jungle predators. These houses are low cost, made of local mud, grass and bamboo.

### Details of Breed Conservation

Hanseel is a local poultry breed of Mayurbhanj district, mostly reared by Tribals. Bird is colorful with red and black feather. Male birds are robust, taller and meat is harder than female. The birds are, heat tolerant and used for fighting and meat purpose. Female birds lay hardly 100 eggs in a year. He naturally incubates the egg with the hens.

A year old bird weighs 4-5 kg. The most important fact about this breed is that it is very much resistant to poultry diseases like RD, Fowl Pox, IBD and Bird Flu. The native place of this breed is Mayurbhanj district of Orissa which borders West Bengal. Hanseel breed of birds escaped from Avian influenza in border area of West Bengal last 2 years. Hanseel bird population in border area worked as a barrier against the spread of disease from West Bengal to Orissa in last 3 years. While West Bengal suffered from bird flu episodes, Orissa escaped from this dreaded disease due to this birds which are native of interstate border area of Orissa - West Bengal. The breed is not yet registered. The approximate bird population is 7000 in that area. Hanseel breed of birds are good foragers and need no external inputs like feed and medicine. A Hanseel bird of 6 months - 1 year old male fetches Rs.2500/- and female bird Rs.2000/-. He earns Rs.1200/- adult bird and Rs.60,000/- per year from selling birds. The birds are free rangers and need no feeding. They are free foragers.

### Traditional knowledge practices adopted :

- i) Feeding of poultry birds with onion in face of any disease outbreak in the area.
- ii) He is maintaining vermi composting to feed his birds naturally with earth worms.
- iii) Use of dried Mahua (*Madhuca indica*) flowers as poultry feed which are abundantly present in the area.

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## Ghumsari Cattle

### *Conserved by Purna Chandra Gouda*

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Via - Bhanjanagar  
Dist - Ganjam, Orissa

#### **Family background**

Purna Chandra Gouda is a cattle breeder of Ghumsari breed of cattle of village Khariguda in Bhanjanagar subdivision of Ganjam district in Orissa. Ghumsari breed has been recently recognized by NBAGR, Karnal. He is 45 years old and he has no formal education but is dedicated in rearing and breeding Ghumsari cattle. He keeps 80 numbers of cattle. He is engaged in this work since last 30 years.

#### **Details of Breed Conservation**

Ghumsari breed of cattle is small built, either light white or light brown in colour and are low yielder of milk i.e.1-1.5 lit of milk per day. The breed is little wild and very difficult in managing them. These are very hardy, drought resistant and disease resistant. Ghumsari breed of cattle are resistant to Hemorrhagic septicemia and Foot-and-Mouth disease. Ghumsari breed of cattle are only seen in Rusikulya river basin, in the subdivision of Aska and Bhanjanagar in Ganjam district. Ten to fifteen years back the total population of this breed was nearly 40,000. Now it has reduced to nearly 20,000 with an alarming rate of decreasing and becoming threatened status.

These cattle are grazed in groups called "gotha" in forests. After forest grazing the cattle are taken home in the evening. The graziers are not interested to keep this breed of animal as problems in forest grazing. Ghumsari breed of cattle are natural grazers and love to inhabit in forests; they have emotional attachment with this breed of cattle as they are good converter of wild forages to milk and cow dung without much problem of diseases and worms.

"Ghumsari breed cattles are our lives; they are our family" - says Purna Chandra Gouda.

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## Rairakhol Buffalo

### *Conserved by Tikeswar Pradhan*

*Address of Livestock keeper* : **Tikeswar Pradhan**  
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Dist - Sambalpur, Orissa

#### **Family background**

Tikeswar Pradhan is 60 years old and has been keeping 35 No. of buffaloes. He is formally educated upto primary school. He is dedicated to buffalo rearing and moves around forests for keeping track of their animals. He lives with his two sons, wife and aged parents. Despite hard labour in agricultural field and dwindling forests he keeps Rairakhol breed of buffaloes which his forefathers were keeping 200 years ago. Tikeswar Pradhan is breeding Rairakhol breed of buffaloes for last 40 years. Now Tikeswar Pradhan is continuing his work of buffalo breeding and rearing, despite the fact that the area is now disturbed and infested by naxalites. Tikeswar's work of conserving the local biodiversity has not been recognized so far.

#### **Details of Breed Conservation**

Rairakhol breed of buffalo is the native buffalo of Rairakhol subdivision in Sambalpur district of Orissa. The breed is not yet recognized by NBAGR, Karnal. This breed of buffalo is different from Sambalpur breed of buffalo on the basis of their habitat. The breed is bit wild. Its body is elongated, horn flat and sideward. Coat colour bit brownish. Body is not bulky as compared to other breed.

Rairakhol buffaloes remain in forests throughout year. They need no house shed to protect themselves from extremities of weather. The buffaloes are low yielder of milk and give 1-1.5 litre of milk per day. The milk is very tasty and sweetish. These animals need no external inputs like feed, medicines, vaccines as they are heat, drought and disease resistant. Most importantly the animals live in herd and are loyal to their masters only. They give milk to their owners only. They select good male calves for breeding by choosing the robust one. The adaptive life of Rairakhol breed of buffalo is such that these are very brave, little bit wild and are so skill-full in herds' life that elephants fear to go near a Rairakhol buffalo herd. In night, adult animals make a ring and calves sleep in the centre, so that wild predators cannot come nearby. The total number of animals in this region Rairakhol Tract is less than 10,000. This breed of buffalo enrich the forest land and forest biodiversity by their dung and very presence in the midst of forest. They use leaves of *annoa squamosa* to treat maggotted wounds which the animals frequently suffer during rainy season.

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## Ghoongroo Pig

*Conserved by Balai Pandit*

*Address of Livestock keeper*

: **Balai Pandit**

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West Bengal.

### Family background

Shri. Balai Pandit (60 years) is illiterate. His family consists of his wife, three sons and one daughter. Ghoongroo Pig keeping is the traditional livelihood for Pandit family for generations together. All are married. They are landless and Pandit community belongs to scheduled caste group. They have education up to primary level. Now they are engaged in pig keeping. They are almost restricted within the block but occasionally visit relative houses in other districts also. They keep Ghoongroo Pig because of good growth, high litter size, tolerant to diseases and better market demand. Number of animals varies depending upon market demand and season. On an average round the year they keep one boar and five sows as breeding unit and 20-25 as growing stock. Kitchen and canteen wastes from a nearby BSF camp are their main source of pig feed. Besides maintaining family and marrying off his daughter He is now able to convert his ancestral thatched house into single storey pucca house with electricity connection.

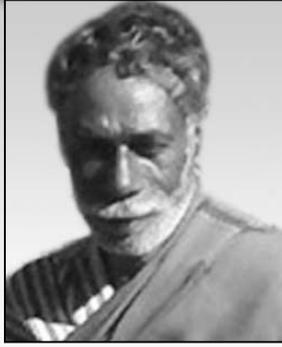
### Details of Breed Conservation

Ghoongroo Pig is maintained by the Pandit family for generations together. The term Ghoongroo means anklet in local language. However there is no known explanation for this very name. Keepers manage the animals both under stall-feeding and stall-feeding-cum-grazing. Simple housing principally made up of bamboo and jute stick is used for protecting from rains. Pigs are black in colour with compact body, thick coarse and long hair coat, long tail, upwardly curved snout. The face is broad and flattened with large and heart shaped ear resembling those of elephant. Average litter size at birth is 11-12 and litter size up to eighteen is not uncommon on low to medium plane of nutrition. Body weights at birth, 5 months and one year ages are 1, 59, 118 kg respectively irrespective of sex. This unique germ plasma has the potential to replace exotic breed from temperate zone used in improved pig production programmes. However the identity of the breed is under constant threat due to indiscriminate breeding with other breeds / varieties particularly the local nondescript one due to keepers' ignorance. The Ghoongroo Pig has been classified as threatened breed by the Govt. of India. Approximate present population is 7000-8000 only.

Pandit family is engaged in not only maintaining this breed. but they carry out selection in every generation by keeping the best animals as breeding stock based litter size, phenotypic characteristics and growth rate. There is very good demand for Ghoongroo piglets from Pandit's farm among local pig keepers. His annual net earning is to the tune of Rs.85,000/-. Pandit knows all tit-bits of modern pig keeping viz. deworming, vaccination and even castration by open method using local knowledge. Besides supplying quality Ghoongroo piglets to local keepers, they also help other keepers in specialized services like treatment with indigenous knowledge and for castration.

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## Toda Buffalo

### *Conserved by Themorsh Kuttan*

Address of Livestock keeper : **Thermosh Kuttan**  
Koil Mund, Sandynallah Post  
The Nilgiris - 643 237.

#### Family background

The breeder, Shri. Themorsh Kuttan, aged 80, belongs to the Toda community, one of the primitive tribal communities of the Nilgiris District, Tamil Nadu. He is a permanent resident of Koil Mund, a Toda hamlet, for the past 80 years. Presently, the breeder owns a herd of about 70 Toda buffaloes of various age groups. Toda buffalo, derive its name from the Todas, an aboriginal tribe who inhabit the Nilgiri hills of Tamil Nadu in South India. Their livelihood depends mainly in keeping a herd of buffaloes. The life of Todas is largely centered on their sacred buffaloes, which form an integral part of their sustenance and cultural heritage. The importance of these buffaloes in cultural activities like birth, marriage and death ceremonies have been well-known. Since most of the Toda hamlets are located amidst forest areas and these tribals are entirely dependent on the forest and grasslands for grazing of their buffaloes, the Government of Tamil Nadu has assigned about 5 acres of land for exclusive grazing of buffaloes in recognition of their grazing rights. Among 70 animals 20 are dedicated for temple purpose and they are known as *Posthir*; such animals are milked exclusively to make clarified butter or ghee and in turn used for lighting the lamps in temple during 3 months in a year (Jan - March). In the remaining months the calves will be allowed to suckle the entire milk from mothers. There are about 200 buffaloes are of this temple buffaloes in all mands together. He is getting about 20 litres of milk daily and after using for home consumption 12 litres are sold to cooperative milk society. He obtains about 5 loads of manure and it is used for his lands for fertilising crops viz. carrot, cabbage, potato and peas grown in 5 acres of lands.

#### Details of Breed Conservation

The existence and association of this buffalo with the Todas had been traced back to the year 1603. The people and their buffaloes have a history of more than 500 years. The Toda buffaloes are unique in their behaviour and morphological characteristics including the size and shape of horns and significantly differ from other buffaloes of the plains. Breed over generations, these buffaloes are well adapted to the hills and are able to withstand extremes of weather without any shelter. The Toda buffaloes are found to produce moderate quantity of milk under an extensive management system with daily milk yield ranging from two to six litres with a high butter fat content.

In Toda buffaloes, it is very difficult to handle males beyond two years of age. Beyond this age, the males generally escape into forest and live as ferals. They join the herd only during the breeding season. Selection is not normally practiced in males. However the breeders are very conscious of sound breeding practices and retain the best females among the calves as replacement stock. Breed type had also been a criteria for selection with this breeder.

Against odds of terrain, very hostile climatic conditions and continuous threat by wild predator animals, the breeder has carried his buffalo breeding activities through decades and developed a fine herd of Toda buffaloes with typical breed characteristics. The breeder derives his income from sale of milk to the Co-operative Milk Union.

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## Toda Buffalo *Conserved by Ranjith*



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### Family background

The breeder, Shri Ranjith (28) belongs to the Toda community, one of the primitive tribal communities of the Nilgiris District, Tamil Nadu. He is a permanent resident of Gaddi Mund, a Toda hamlet. Inherited a fine herd of Toda buffaloes from his father, who has been a breeder of Toda buffaloes for the past 80 years. Shri Ranjith presently owns a herd of about 30 Toda buffaloes of various age groups.

Toda buffalo, derive its name from the Todas, an aboriginal tribe who inhabit the Nilgiri hills of Tamil Nadu in South India. Their livelihood depends mainly in keeping a herd of buffaloes. The life of Todas is largely centered on their sacred buffaloes, which form an integral part of their sustenance and cultural heritage. The importance of these buffaloes in cultural activities like birth, marriage and death ceremonies have been well-documented. Since most of the Toda hamlets are located amidst forest areas and these tribals are entirely dependent on the forest and grasslands for grazing of their buffaloes, the Government of Tamil Nadu has assigned about 5 acres of land for exclusive grazing of buffaloes in recognition of their grazing rights.

He is obtaining about 10 litres milk per day and sells @ Rs. 20/- per litre. He gets income through sale of dung; annually he obtains 3-4 tractor loads of dung. Each load is with 240 baskets. It is valued @ Rs.10,000/- per load. However he also uses half of this manure for his own field of 3 acres (grown with carrot, cabbage and potatoe) and remaining portion is sold. He also disposes grown up excess males after keeping it for 4 years @ Rs.10,000/- per animal.

### Details of Breed Conservation

The existence and association of this buffalo with the Todas had been traced back to the year 1603. The people and their buffaloes have a history of more than 500 years. The Toda buffaloes are unique in their behaviour and morphological characteristics including the size and shape of horns and significantly differ from other buffaloes of the plains. Breed over generations, these buffaloes are well adapted to the hills and are able to withstand extremes of weather without any shelter. The Toda buffaloes are found to produce moderate quantity of milk under an extensive management system with daily milk yield ranging from two to six litres with a high butter fat content.

In Toda buffaloes, it is very difficult to handle males beyond two years of age. Beyond this age, the males generally escape into forest and live as ferals. They join the herd only during the breeding season. Selection is not normally practiced in males. However the breeders are very conscious of sound breeding practices and retain the best females among the calves as replacement stock. Breed type had also been a criteria for selection with this breeder.

Against odds of terrain, very hostile climatic conditions and continuous threat by wild predator animals (tigers), pollution of water due to effluents of Sterling company producing fertilizer from animal bones etc., closure of forests for planting trees prohibited in traditional grazing areas, the breeder has carried his buffalo breeding activities through decades and developed a fine herd of Toda buffaloes with typical breed characteristics.

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## Kachchi Camels

### *Conserved by Rabrakhiya Haji Meran Jat*

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### **Family Background**

The breeder, Rabrakhiya Haji Meran Jat (53) has 5 children. Not formally educated, relies on traditional wisdom for camel rearing. His sons help him in grazing and raising camels. Now he has 100 camels - 30 young ones, 56 adults raising, 13 calves and 1 breeding bull. He belongs Hajiani Jat caste of Muslim community.

He lives with his family members in Morgar in Lakhpat taluk. They are fully dependent on camel rearing, for their livelihood and camel products (like selling of camel milk, wool items and selling of young camels). During stress period in summer and winter, he has to move to nearer areas with camels in search of grazing and water. There has been a lot of industrialization in the area earlier used for rearing of camels. He follows his profession as camel rearing for the past few decades.

### **Details of Breed Conservation**

He is conserving indigenous camel breed mostly Kachchi camel from generation to generation. His ancestral family is keeping this breed of camel for more than 125 years so far as he remembers. Camels in this area were mostly dependent on mangrove feeding and that was good food source for them but now this feeding source and camel population is reducing day by day and only few populations are left in this taluka due to industrialization.

The camel breeders do not have access to the grazing lands, now under the custody of Forest Department. Village gauchar lands are also declining due to encroachment as well as degradation of those lands due to lack of community management and support.

Water sources are depleting and increase of salinity, making life more challenging for the camel breeders since they need to move far away in search of water for their camels. So in this type of critical condition, most of the camel breeders were migrated or sold their camels. Rabrakhiya is still following his family tradition in conserving indigenous camel breed. Presently he has 100 camels and raising them in extensive production system.

He keeps animals for sale of live animals, milk and wool. He has maintained true blood line of 6 camels; every blood line has unique name like Manki, Chavari, Lakhori, Rangu, Ratu, Bhatu, etc. The offspring of one blood line carries the name of the mother. For example, female calf of Manki will carry the same name as Manki.

### **Breeding Practices**

Natural service is followed for breeding. Selection of breeding male camel for natural service is based on the following features: dam milk, well built tall body, thin leg with small foot pad, small lip and attractive chest pads, short and thin neck, hump long and thick, scrotum and penis size and position, colour, ear small and straight.

Traditional practices followed by him is given below :

S.No	Name of the Disease/Ailment	Traditional Practices
1	Bant / Respiratory problem	Give mixture of onion and black cumin
2	Fitoda / Trypanosomiasis	Give salt upto 7 days
3	Tympany / Bloat	Give mustard oil

After losing many camels in the prevalent diseases like Fitoda and Dermatitis, now he has 100 camels. He continues to have belief in this breed and the traditional knowledge obtained from ancestors. Rotational grazing system is followed in the region. Every year he sell around 10-15 camels to camel traders in range of Rs.10,000/- to 15,000/- per animal which in turn sold to farmers for transport, agriculture and milk purpose.

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## Ankamali Pigs

*Conserved by Shirley Thomas*



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### Family Background

Shirley the mother is the bread winner of the house. She has two daughters studying in school. She is rearing Ankamali pigs since last 15 years. She keeps two sows and one boar of the Ankamali pig breed, sustaining them on kitchen waste, leaf fodder and weeds.

The piglets are sold in the local market. About 45-55 piglets are sold every year. Recently she sold 27 piglets at the age of 45 days, each for Rs.1000/-. She also keeps a few goats. She is active in the breeding of the Ankamali pigs where there are no much players. Although the Kerala government is promoting exotic white pigs, it is the local black Ankamali pig breed that is better suited for income generation resource for poor farmers. Its advantages are its small size (only 20-25 kg slaughter weight), ability to thrive on local feed, disease resistance, heat tolerance and uncomplicated reproduction.

### Details of Breed Conservation

Ankamali pig is the only recognized pig breed of Kerala. They are black in colour, very sturdy in nature and resistant to most of the diseases. Average weight around 50 kg. At slaughter age the weight is around 26 kg. They were reared in large numbers in the middle parts of Kerala, especially in the Ankamaly, Koothattukulam and Pala areas. Due to the stigma of people against the unhygienic management practices prevailed in earlier times, many people withdrew from rearing black pigs.

In Kerala the introduction and popularity of the exotic white pigs led the black pigs of Kerala to an endangered level. But there are farmers retaining the breed even now. The attraction of this breed is mainly the small body size (20-25 kg at the age of slaughter), the capacity to utilize the local feed, the prolificacy (7-12 in a litter) good mothering ability, heat tolerance and disease resistance. Its population is approximately 3000 numbers.

Conservation of the breed is mainly by farmers interested in the black desi pigs who have a preference for their meat. Some others keep breeding sows and rear the piglets to weaning about 45 days and sell them. Certain others take them for rearing and sale for slaughter. This is also profitable as black pig meat is a delicacy now. The profit in the business keep a few poor farmers in this job.

Females are selected according to their litter size and litter weight. Males are selected according to their ease of management and weight gain.

Mostly intensive system of management with the sows and boars housed in separate styles. Litter is allowed to be with the mother till weaning at approximately 45 days. They are fed with agricultural waste, offal and household wastes. No grazing is usually permitted due to the stigma of people against wandering pigs.

## Indigenous knowledge in relation to animal breeding

People have a preference for the meat of black local pigs as they need their meat especially for some rituals like offering to their forefathers (Pithrus). These animals are reared mainly by Christian and Ezhava communities. Breeding is with the largest and docile boars. Other males are castrated by the local experts. The sows are selected based on their prolificacy and mothering ability.

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## Kangayam Cattle

*Conserved by Smt. Soundaram Ramasamy*

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### Family background

Smt. Soundaram (45) studied up to 5<sup>th</sup> standard. She is owning 9 acre of Korangadu pasture land (pasture land in dry land ) and 5 acre of garden land. Her mother Smt. Palaniyammal has also been living with her. Because of hard work they developed best practices in livestock keeping (maintaining 4 breeding bulls of Kangayam cattle, 45 sheep of meichery breed at present) which they have been doing for many generations in their family.

### Details of Breed Conservation

In their family they have been maintaining local breed of cattle called as 'Kangayam'. It is known for draught purpose. Nowadays the demand for draught animal is not there and many farmers shifted to rearing crossbreed dairy cows which in turn fetch good income through sale of milk. These animals are suffering repeat breeding. There is no good bulls for natural service in the area. Few farmers are still interested to keep Kangayam cattle for their breed value or sentiments attached with the local breed. Soundaram selected best male calf and developed a breeding bull. She becomes expert in identifying the marks or body characterization of Kangayam breed.

She along with help of her husband Sri Ramasamy and Sri Nataraj of Karuppanvalasu Puthur surveyed best Kangayam bulls or male calves in the area and adopt them for improving the productivity in Kangayam cattle. While selecting male calves for breeding bulls they observe the characters such as small or shortness of horn, thin tail (*sannam*), face short (*kuttai*) and legs short (*kaal sannam*); prominent eyes, larger hooves (*kulambu*), wider shoulder bone (*vila elumbu*), larger hump (*thimil*). They choose such calves usually from 2<sup>nd</sup> lactation animals. The animal should not have *suli* or body markings except *raja suli* and *thamini suli*.

Her bull is able to serve about 20-30 animals in a month. She collects Rs.150/- per natural service. The conceiving rate is more than 80% and she tells very few cows are brought for second time for servicing. By seeing good demand for natural service she is now maintaining 4 breeding bulls of Kangayam breed. The service rate is about 100-120 animals per month or more.

The bulls are grazed in *Korangadu* pasture land of 10 acres. *Korangadu* typically consists of a mixture of grass, legumes and tree species including annual and perennials. It has predominantly three major species of flora which are spatially in three tiers. The lower tier of *Kolukattai* grass (*Cenchrus* sp.), an upper tier of tree species including *Acacia leucophloea* that is locally called *Velvel*, and a live fence comprised of a thorny shrub locally as *Mullu Kiluvai* (*Commiphora berryii*) makes up the middle tier.

For maintaining 4 bulls an area of 10 acres pasture land are needed which supports grazing of animals for a period of 3 months during rainy season. In the remaining months they supplement with sorghum straw, paddy straw and last year she spent Rs.30,000/- for procuring the dry fodder. She is also keeping 45 sheep and taken 2 ha of *Korangadu* pasture land on lease basis (*boghi*) by paying Rs.3000/- per

year. In *Kornagadu* pasture land she sow legumes viz. *naripayaru* (*Phaseolus trilobus*) and horse gram each 5 kilo which supplies protein to animal diet. Sheep fetch an annual income of Rs.75,000/- mainly through disposal of about 20 lambs in a year. Combination of sheep + cattle breeding is risk free source of sustainable income from available resources of land and man power she feels. The fertility of land is maintained by performing the *patty poduthal* in which sheep flock are penned during the night and the *patty* is being shifted on day today basis.

### Tradiional Practices

Based on traditional knowledge of her mother Smt. Palaniyammal she developed the following practices which are known for better up keeping of animals.

**i) For cows not conceiving :** The animals should be treated for control of intestinal worms. They administer 200 ml of neem oil and also 4-5 lemon fruits (fruits are cut and administered orally). In addition they administer Aloe vera in the empty stomach for 3 days continuously. This will ensure conceiving in cows after natural service.

**ii) For maintaining the vigour of breeding bulls :** Cotton seeds 2 kilo, rawrice 2 kilo are to be soaked together in water for 5 hours and this has to be fed daily. (One coconut will be grated and mixed with this ration). They spend Rs.250 daily for 4 bulls. In addition 1 kg of groundnut cake is soaked in water and mixed with drinking water for animals to drink. This will be sufficient for 4 bulls.

**iii) For Diarrohea in sheep/cattle :** Leaves of *Thuthi* (*Abutilon indicum*) 2 handfull leaves of *Poovarasu* (*Thespesia populnea*) 2 handfull and cumin 50 gm are to be ground well and administered one time.

**iv) For HCN poisoning :** Due to intake of dried sorghum plants (young seedlings withered due to deficit of water) the animals will develop choke leading to death if not attended immediately. For this she is administering jaggery mixed water or chilli powder mixed with water.

**v) For animals not taking water :** The root of (6" length) *varikumatikai* (*Citrullus colocynthis*) is ground well and administered orally. This is also effective for blood tinged diarrrohea in cattle and sheep.

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## Deoni Cattle

*Conserved by Shesherao Tukaram Suryawanshi*

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Maharashtra  
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### Family Background

Shesherao Tukaram Suryawanshi (65) is old landless labourer belongs to harijan community. He is illiterate and owning 2 Deoni cows, 2 Deoni female calves and one Deoni bull.

### Details of Breed Conservation

Deoni cattle breed is only dual purpose breed of Maharashtra. This family since last two generations maintaining deoni cows that is bull mothers. Each member of the family goes to work in the farmers field along with either cow or heifer or bull calves. They feed animal with the grass procured during weeding and sometimes grazing them road side and on common grazing lands. They also purchase dry fodder and store it for emergency. Their main income is from sale of male calves and heifers. They also derive income from sale of manure. His annual income is Rs. 40,000/-. He is presenting his best maintained cows and heifers at state and national level cattle shows since last 25 years.

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