

Lingayat Bio-Cultural Protocol

2009



Lingayats Bio-cultural values

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Overview

This protocol specifically:

- Sets out our bio-cultural values and explains how we, the Lingayats, have developed and preserved unique breeds of livestock and traditional knowledge associated with them, and how our pastoral lifestyle has developed the co-evolved ecosystem of Bargur forests which we have traditionally conserved and sustainably used;
- Details our customary decision making process involved in providing free prior informed consent to any actions that relate to our grazing rights, animal genetic resources and associated traditional knowledge;
- Illustrates the disastrous impacts that our exclusion from previously communal grazing areas and forests is having on our lives, livestock, genetic resources, traditional knowledge and the forest ecosystem itself;
- Articulates our forest access rights and rights over our genetic resources and associated traditional knowledge under Indian law

It calls on the National Biodiversity Authority to:

- Recognize our Bargur cattle, *Malai Erumai* (hill buffalo) and associated traditional knowledge as set out in the Lingayat Biodiversity Register and to include it in the Peoples Biodiversity Register;
- Facilitate the setting up of Biodiversity Management Committees in Bargur Panchayat where we live and to support these Committees in ensuring the conservation and sustainable use of our breed diversity and traditional knowledge;
- Strengthen *in situ* conservation of breeds viz Bargur cattle, *Malai Erumai* / hill buffalo of the Lingayats and include them in the BMC being initiated by the government;
- Advise the Central Government and coordinate the activities of the State Biodiversity Board to protect the customary grazing rights of the Lingayats and eradicate *Lantana camara* so as to safeguard our traditional lifestyles that ensure the conservation and sustainable use of our breed diversity, associated traditional knowledge and the local ecosystem ;
- Ensure that our prior informed consent (according to customary law) is obtained before any decision are taken (such as tree planting in forests, solar powered fencing, artificial insemination) that affect our traditional way of life or access is granted to our breed diversity and associated traditional knowledge for research or

for commercial purposes, and further ensure that we receive a fair and equitable share of the benefits arising from the utilization of our breeds and traditional knowledge according to mutually agreed terms; and

- Calls on the Secretariat of the UN Convention on Biological Diversity, specifically under Article 8(j) of the Convention, to recognize our contribution to the conservation and sustainable use of biological diversity in the Bargur forest ecosystem; and also calls on the UN Food and Agriculture Organization to acknowledge the importance of our animal genetic resources and to recognize livestock keepers' rights.

Where we live

We are Lingayats, an indigenous Kannada-speaking community who live in the midst of Bargur Forest Range situated in Western Ghats in Erode district, Tamil Nadu, south India. We number about 10,000 people. We have lived in the region for over 400 years rearing unique breed of cattle, namely Bargur (also spelt as Barghur) and acting as custodians of the local forests.

Our origin

Our community deity is Matheswareaswami whose temple is located in Kollegal taluk of Chamrajnagar district in Karnataka state. When we came to Bargur Range and settled in this forest, we also brought our cattle. These cattle are accustomed to climbing the hills for grazing over the years and developed compact body with more stamina and strong legs. Such animals have been kept by us for ploughing operation. We are keeping animals as a gift of nature and extend our love and affection to them.

Our spiritual life

We Lingayats worship Veerabadrasami or Basavannasami (Deity of Lord of Shiva cult). We nominate our families by turns to act as priests for the temple on monthly basis. Each month, the designated family observes rituals like waking up early the morning, taking bath and preparing food (*Prasad*) for the deities. The priest-designated family should not move outside the village, especially should not visit the families where death/obsequies is taking place to avoid defilement. We usually cook special variety of rice called *Karuppu nellu* (traditional red rice). In the evening we participate in the village *bajan* (singing spiritual songs) especially during the month of '*Margali*' (December-January). In each temple the symbol of lying posture of cow is erected on the top.

We rear our cattle with full involvement and love. We give one day *Oyvu* (rest day for cattle) and on that day all cows will not be milked i.e. every Monday; but calves will be allowed to suck the entire milk. On all Mondays, bullocks also take rest and will not be engaged in ploughing or any other work purpose. In each family, one or two animals in the herd will be dedicated to Matheswaraswami (an incarnation/form of Lord Shiva) and such animals will be maintained till the point of its death or allowed for free grazing in the vicinity of Matheswaraswami temple.

Grazing system

We are living in the midst of jungle and we also have to cultivate lands. The land area owned by a Lingayat family is on an average 1-3 acre of rain-fed land. We raise jowar, pulses, field beans, ragi etc. When we sow crops at the onset of south-west monsoon i.e. during the month of *Adi* (July-August), it is difficult for us to keep animals as they graze in the crop land. Therefore, we take them deep into the forests after collecting all animals. The animal herder who is having good bulls will gather cows from farmers for temporary herding. The herder will gather a herd to a size of 50-100. The animals are penned during the night time in places such as Karkekandi, Otithikovai etc. At present 22 such herds are being maintained by us.

In some villages like Velampatti and Kuttaiyur individual herders maintain their herds by daily taking them to the forests and return to their respective cattle sheds situated in their village. The dung of the animals is stored and used for manuring the cultivable land in the hilly terrain.

Animal genetic resources

We settled in Bargur forests some four centuries ago and now we live in 36 hamlets with size of 10-200 house-holds in each hamlet. Our native breed of cattle is adapted to this area and can climb hills and also to a certain extent face wild animals as a herd with their sharp and pointed horns. We also maintain buffaloes of local type which yield about 2 litres of milk and are good in climbing hills and suitable for forest grazing. We developed indigenous knowledge in management of animal herds, selection of bulls, medicinal and grass species for animal nutrition and treatment.

We maintain the following breeds:

- Bargur cattle
- 'Malai Erumai' known as hill buffalo

These breeds are intrinsically migratory and cannot be stall-fed. They do not survive or retain their vigour, if they are forced to stall-feed and therefore adapted to forest ecosystem.

Traditional knowledge

We live in the midst of forest which is in Western Ghats at an elevation of about 1000-1100 metres above mean sea level. We developed knowledge about plant species which are useful for treating humans as well as animals. Many old Lingayat families are still practicing ethno-veterinary medicine to all animal diseases including black quarter. We developed criteria for selecting good animals for breeding purposes based on traits essential for raising true-to-type animals. We administer medicines only during Sundays as 'sun' sign is auspicious to us.

We conserve and use Bargur Forest's biodiversity

We are integral part of Bargur Forest ecosystem. We therefore protect forests from fire and help protecting wildlife. Earlier, Mr. Veerappan who was a forest brigand in that forest was hunting male elephants (for ivory) and smuggling sandalwood from the forests. Enormous forest resources were depleted by him. But we contribute towards conservation of wildlife. Special Task Force prevented us from entering into the forest and prohibited animal grazing due to the unfounded suspicions that were acting as messengers for his gang. Now even after killing him, the restriction to enter into forest along with animals is not fully removed especially in the fringe areas of forests.

There were many hundreds of cattle herds and they provided manure useful for agricultural land as well as to the forest. The young ones are some times preyed upon by panthers and other predators and therefore occasional casualties of calves is not at all loss to the herder but it is providing food for wild animals during critical times. In a herd of 50 animals there will be loss of 4 animals (annually). In the absence of forest grazing such predators will visit our habitats and even attack humans and our properties. Wild elephants visit our agricultural land during summer and they depend upon our water resources created in human settlement. But during their visit to our fields they damage our crops and properties. Too much of elephant population is also posing nuisance both to forest and human settlement. The wild animals damage solar powered electric fencing and also damage the newly planted seedlings such as bamboos.

Without understanding intricacies of elephant-domestic animal grazing-agro- ecosystem the Forest Department is interested in completing target area tree planting programme leading to loss of money and efforts. They are not consulting our communities to use the traditional wisdom or innovations from grassroots.

Forest Department officials put electric wire fencing on village border to prevent elephant passage to village agricultural land. This approach is working initially and it is not a long term strategy. The damaged fencing is giving way for elephants to freely enter villages or agricultural land. Forest officials never allow rotational grazing system for traditional forest graziers but close the forests in full length and once closed (in the name

of planting) **is never re-opened**. This system increases proliferation of grass growth and during summer the dried grasses facilitate spreading forest fire and destroy the forests.

Now closure of forests also resulted in spreading the growth of poisonous weed plant locally called as “Unnichi” (*Lantana camara*). This weed is also taking away the grazing area of not only cattle but also of the wild ruminants.

Over the last 20 years almost all the forest area is covered with the ‘Lantana’ bushes. Forest Department has not initiated steps to eradicate the alien species and is not even ready to discuss with our Lingayat community on how to eradicate the species.

The local villagers have knowledge about the type of grass species and their importance to cattle as well as wild elephants. The important grass species include *Manjampul*, *Nanalpul*, *Udugapul*, *Pattamanjilpul*, *Kurinji maram* etc. Due to encroachment of Lantana, the local species are almost suppressed or have vanished.

Simple concept of uprooting the Lantana bushes and planting bamboo / grass slips will not rejuvenate Lantana bushes suggested by local communities is a good idea to be tested. But Forest Department is not open to such low cost innovation but allowing the weed still to spread in an uncontrolled manner and they also believe that such poisonous weed growth will prevent the villagers from entering the forest and help wildlife to multiply.

Nowadays the restriction of animal graziers into forests has considerably reduced the population of ‘Bargur’ cattle. A recent survey conducted by a team of scientists from Tamil Nadu Veterinary Animal Science University reads “distribution and population status of Bargur cattle” in 21 hamlets of Bargur panchayat shows that a total of 2529 animals only are available. The population falls under endangered category. (Ganapathy et al., 2009)

On the other hand the wild elephants increased many folds leading to human and animal confrontation and conflicts. From co-living to conflict facing becomes the reality which is posing threat to agriculture, soil fertility and erosion of traditional knowledge. This is the scenario created by Government by alienating from participation in decisions making process.

Prior informed consent and benefit sharing

Our animal genetic resources and our associated traditional knowledge about breeding and ethno-veterinary practices are collectively owned by our Lingayat community. We have customary laws that regulate decision making in our community. For issues that relate to all community members we assemble at Donagiriswami *mutt* that is constituted by our elders from 36 hamlets in Bargur Panchayat before resolving the matter. This is the practice for any conflict resolution followed for generations.

When Forest Department wanted to plant trees and close the forests for implementing Joint Forest Management (JFM) programme, they have not consulted our traditional social institution. Village Forest Committee promoted by the Forest Department is not a democratic unit and it is there to fulfill official formalities rather than being participatory in nature. The species of plants selected for planting, fencing, rotational grazing system for Bargur cattle / buffalo were never discussed with us. Now because of this sudden development we had to lose our cattle, livelihoods and many of our family members / youth are going to nearby cities like Tirupur, Coimbatore and, Erode to be engaged in unskilled labour market. Now we are unable to pass on the resources and knowledge to our younger generation as keeping animals of traditional breed is not at all recognized by the Government.

Our exclusion from forest areas is changing the ecosystem and leading to encroachment of alien species *Lantana camara* which spreads to all parts of forests in an alarming scale. The reduction in grazing is resulting in an excess of grass and foliage that is leading to an increase in the prevalence and severity of forest fires.

Our future

Younger generation is not interested in our agricultural and animal husbandry activities because of hardships associated with the lack of grazing but at the same time frustrated with city life as they have to work as unskilled labourers in mills / factories. We are caught in a no man's land of being unable to carry on our traditional livestock keeping and unwilling to suffer the indignities of life as unskilled labourers.

Due to lack of grazing land many herders are leasing out their herds to bordering Karnataka state where the local state government is somewhat liberal in allowing such pastoralism. Therefore the bordering villages such as Soolakkaombai, Minna, Erambadi, Kachannur and Koppa are keeping specimens of Bargur breed of cattle by sustaining their herds.

We require grazing rights, right to eradicate the alien species *Lantana* through Government schemes implemented through National Rural Employment Guarantee Act (NREGA) which also assures 100 days employment for rural poor in a year by employing in constructive work.

Our rights in national laws and policies

A. *The Biological Diversity Act of 2002 and the Biological Diversity Rules of 2004*

The Biological Diversity Act of 2002 in its efforts to fulfill India's commitments under the Convention on Biological Diversity provides for the conservation of biological diversity, sustainable use of its components and the fair and equitable sharing of benefits arising from the use of such biological diversity and associated traditional knowledge (TK). The Biological Diversity Act sets up the National Biodiversity Authority (NBA) and the Biological Diversity Rules of 2004 lists the functions of the NBA as including regulating access to biological resources and associated TK for commercial and research purposes. The NBA is also empowered to advise the Central Government on any matter relating to the conservation and sustainable use of biodiversity and associated TK and the fair and equitable sharing of benefits arising from the utilization of biological resources and associated TK. ***The Biological diversity Act among other things requires the Central Government under Section 36 to promote the conservation and sustainable use of biological diversity through in situ conservation and minimize the adverse effects on biological diversity of any project undertaken through environmental impact assessments that includes public participation.*** The Central Government is tasked with ensuring respect and protection of associated TK of local communities in accordance with the recommendations of the NBA including registration of TK and other sui generis methods for its protection. ***Under Sec 38 the Central Government is also required to preserve and protect those species that are on the verge of extinction.***

In order to ensure the effective fulfillment of the role of the NBA at a local level, local bodies such as the Panchayats or Municipalities are required under Sec 41 to set up Biodiversity Management Committees (BMCs) to promote conservation and sustainable use and documentation of biological diversity and associated TK. The NBA and the State Biodiversity Boards would consult with the BMCs while taking any decision relating to the use of biological resources and associated TK within the territorial jurisdiction of the BMC. Under Rule 22 (6) of the Biological Diversity Rules of 2004 the main function of the BMC is to prepare a Peoples Biodiversity Register in consultation with the local people which shall contain comprehensive information on availability and knowledge of local biological resources and their associated TK. The Biological Diversity Act under Sec 21 envisages that the NBA will base its approval regarding any application for access to biological resources or associated TK on the whether a mutually agreed terms and fair and equitable benefit sharing has been negotiated with the local community that provides such resource or associated TK (benefit claimers according to Sec 2 (a) of the Biological Diversity Act). The local community or benefit claimers in question will be identified according to the Peoples Biodiversity Register under the territorial jurisdiction of the local BMC.

The Biological Diversity Act and Rules therefore provides certain rights to the Lingayat community:

- The right to consultation and public participation prior to any project that may affect the livelihoods of Lingayats, their animal breeds and associated TK. The right to conservation and sustainable use of our animal breeds;
- The right to give prior informed consent and negotiate mutually agreed terms when any Lingayat animal genetic resources or associated TK is accessed and share fairly and equitably in any benefits arising from the utilization of their animal genetic resources and associated TK;
- The right to a Peoples Biodiversity Register that will document Lingayats biological diversity and associated TK;
- The right to a BMC to advise the NBA on how the Lingayats biological resources and associated TK can be conserved and sustainably used; and
- The right to carry on the Lingayats traditional lifestyles which involves continued access to grazing lands in order to conserve the biological diversity of our breeds and associated TK.

B. The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

The preamble of the Forest Rights Act in accordance with Art 8(j) of the Convention on Biological Diversity recognizes that the forest dwelling scheduled tribes and other traditional forest dwellers are integral to the survival of the forest ecosystem. The Forest Act seeks to address the long term insecurity of land tenure and of these communities and therefore recognizes the rights of forest dwelling tribes and other traditional forest dwellers, which include nomadic or settled pastoralists, on all forest lands.

The Forest Rights Act therefore provides certain rights to the Lingayats community:

- The right of ownership, access to collect, use, and dispose of minor forest produce which has been traditionally collected within or outside village boundaries (Section 3c)
- Community right of use or entitlements including grazing (both settled or transhumant) and traditional seasonal resource access, of nomadic or pastoralist communities (Section 3d)
- The rights in or over disputed lands under any nomenclature in any State where claims are disputed (Section 3f)
- The right to eradicate alien species like Lantana , regenerate or conserve or manage any forestry resource which we have been traditionally protecting and conserving for sustainable use (Section 3i)

- The right of access to biodiversity and community right to intellectual property and TK related to biodiversity and traditional knowledge related to biodiversity and cultural diversity (Section 3k)
- The right to traditional rights customarily enjoyed by the Lingayats (Section 3l)

We acknowledge the limitation of these rights under Section 4 of the Act in cases where forests are designated as National Parks or Sanctuaries, but point out that the processes set out under Section 4(2) such as ascertaining whether other reasonable options such as co-existence are not available – remain to be complied with.

C. National Policy for Farmers

The National Policy for Farmers (NPF – 2007) is an attempt to reorient agricultural policy to take a more holistic vision of agricultural production to include a focus on socio-economic wellbeing. Animal genetic resources and pastoralists are among the areas it focuses on to achieve *in situ* conservation according to the NBA.

The NPF acknowledges livestock keepers' inherent rights to continue to use and develop their own breeding stock and breeding practices and calls on the government to recognize these rights, acknowledge, livestock keepers' contribution to the national economy, and adapt its policies and legal frameworks accordingly. As part of this effort, it underscores the need to document the indigenous knowledge of pastoral communities about animal conservation, maintenance and breeding.

To achieve these aims, the NPF calls for:

- Restoration of traditional grazing rights and camping rights in respect of forest areas and in those areas earmarked for grazing purpose in village common lands;
- Formalizing entitlements (including issue of permanent grazing cards) for traditional pastoralists/herders maintaining native animal breeds to enable free access to notified or demarcated grazing sites and migration routes;
- Conservation and expansion on grazing land and drinking water sources for livestock;
- Documentation of indigenous livestock breeds to recognize and protect the intellectual property rights of the local communities / individuals conserving these livestock breeds; and
- Involvement of pastoralists in all local natural resource management programs, including village forest committees and joint forest management.

We call on the National Biodiversity Authority

We call on the National Biodiversity Authority to:

- Recognize our Bargur cattle, *Malai Erumai* (hill buffalo) and associated traditional knowledge as set out in the Lingayats Biodiversity Register and to include it in the Peoples Biodiversity Register (under Rule 22(6) of the Biological Diversity Rules);
- Facilitate the setting up of Biodiversity Management Committees in Bargur Panchayat where we live and to support these Committees in ensuring the conservation and sustainable use of our breed diversity and traditional knowledge (as per section 41 of the National Biodiversity Act);
- Strengthen *in situ* conservation of breeds viz Bargur cattle, *Malai Erumai* / hill buffalo of the Lingayats and include them in the BMC being initiated by the government (under sections 36 and 41 of the National Biodiversity Act).
- Advise the Central Government and coordinate the activities of the State Biodiversity Board to protect the customary grazing rights of the Lingayats and eradicate *Lantana camara* so as to safeguard our traditional lifestyles that ensure the conservation and sustainable use of the our breed diversity, associated traditional knowledge and the local ecosystem (under section 36 of the National Biodiversity Act).
- Ensure that our prior informed consent (according to customary law) is obtained before any decision are taken (such as tree planting in forests, solar powered fencing, artificial insemination) that affect our traditional way of life or access is granted to our breed diversity and associated traditional knowledge for research or for commercial purposes, and further ensure that we receive a fair and equitable share of the benefits arising from the utilization of our breeds and traditional knowledge according to mutually agreed terms (under section 21 of the national biodiversity Act);

We commit to protecting the biological diversity and associated traditional knowledge

We commit to protecting the biological diversity of the region, our animal genetic resources and associated traditional knowledge, by:

- Upholding our traditional roles as custodians of the forests and as sustainers of the co-evolved forest ecosystem of the region;
- Protecting the forest against fires by regulating the grass growth by grazing and by fighting forest fires when they break out;
- Sustaining the predator population in the forest through the customary offering of some of our livestock as prey;

- Continuing to increase forest growth through the customary manuring of the forest from the dung of our livestock;
- Eliminating of Lantana species which is encroaching our animal grazing lands including grazing by wild elephants.
- Grazing the fallen leaves on the forest floor thereby keeping symbiotic relationship while adding manure to soil
- Combating illegal logging and poaching in the forest;
- Continuing our traditional rotational or seasonal grazing that facilitates forest growth;
- Promoting and sustaining the breed diversity of our livestock; and
- Preserving and practicing our traditional breeding and ethno-veterinary knowledge and innovations, and sustainable management of forest resources relevant to the protection of the co-evolved forest ecosystem of the region.

Our rights under international law

We Lingayats in our bio-cultural community protocol identify the following principles and rights based on international law and treaties:

A. *Principles*

- We are creators of breeds and custodians of their animal genetic resources for food and agriculture;
- The Lingayats spiritual life and the sustainable use of traditional breeds are highly dependent on the conservation of our ecosystem; and
- Our traditional breeds represent collective property, products of indigenous knowledge and our cultural expression.

B. *Rights*

We have the right to:

- Make breeding decisions and breed the breeds we maintain.
- Participate in policy formulation and implementation processes on animal genetic resources for food and agriculture.
- Receive appropriate training and capacity building and equal access to relevant services enabling and supporting us to raise livestock and to better process and market our products.

- Participate in the identification of research needs and research design with respect to our genetic resources, as is mandated by the principle of Prior Informed Consent.
- Effectively access information on issues related to our local breeds and livestock diversity.

We call on the Secretariat of the UN Convention on Biological Diversity, specifically under Article 8(j) of the Convention, to recognize our contribution to the conservation and sustainable use of biological diversity in the Bargur forest ecosystem. We also call on the UN Food and Agriculture Organization to acknowledge the importance of our animal genetic resources and to recognize livestock keepers' rights.

Our contact details

Mr. Asoka Rajendra Swamigal

Donagiri Mutt

Bargur

Thamaraikarai Post, Anthiyur Via

Bhavani taluk, Erode district

Tamil Nadu, India

Appendix 1: Bargur biodiversity register

We steward the following breeds of livestock, Bargur cattle and hill buffalo have been exclusively developed by the Bargur forest dwelling communities.

1. *Bargur cattle*

The Bargur breed of cattle is primarily a hilly draught breed of Tamil Nadu. Bargur cattle are medium-sized animals. They are red coloured with varying extent of white markings. They are semi-wild and hardy to handle. The complete enumeration revealed that a total of 2529 animals only were available in the breeding tract, out of which 1109 were breedable females. This population size falls under endangered category for the purpose of conservation as per the prescribed standards.



Lingayat community elders recalled that Bargur breed of cattle in Erode district was estimated around 100,000 in 1991 has dwindled to 2500 animals as on date by 2009. These animals used to stay in the forests for eight months and in the agricultural lands for four months. The breed has the capacity to walk long distances, does not require ropes to fasten them and intelligent and obedient animals quick to learn and suited to work and moderate milk yielder. When the Special Task Force (STF) operations began against the forest brigand Veerappan, the police stopped people from grazing these

animals in the forests as a consequence of which many farmers sold their animals. In recent times one of the problems faced by the herders is the presence of alien invasive species Lantana, which covers grazing areas, while the blank areas have been planted by the Forest Department. The Department excludes people from grazing in those areas.

2. *Malai erumai / Hill buffalo*

They are pale brown colour animals with compact body. The horns are medium size with semi-circle curvature. The animals are well accustomed for climbing the hills and suitable for forest grazing. The average milk yield is 2 litres per day. It is known for high fat content in the milk. The buffalo population is about 2000 in Bargur panchayat, mainly to meet local milk requirements including tea stalls.



Case studies

Case 1: Conservation and development of Bargur breed of cattle by Sri. K. Nachimuthugoundar



Sri.K. Nachimuthugoundar (66 years) is a farmer in Anthiyur village,Erode district in Tamil Nadu. He did not have opportunity to attend school in his younger days. Now he is cultivating banana, turmeric, maize and in addition has coconut plantation. He has been maintaining 150 Bargur breed of cattle and the herd has been bred by his family over the last 50 years.



Uniqueness of Bargur cattle

His father Karuppanagounder was living in a village near Kangayam in the same district. About 60 years ago there was famine in that area and the entire family migrated to Anthiyur near Bargur Hills. He also brought Kangayam cattle with him. The new area was in hilly terrain and therefore the Kangayan cattle could not climb the hills for grazing. He realized that local cattle called 'Bargur' was suitable for this tract and therefore crossed with Bargur bulls. Within 4 generations he completely changed the breed into 'Bargur type'. His father was careful in selecting the bulls. He selected male calves which are in good body length, red color horn, eyes and also such calves born from second lactation mothers. The salient feature of the breed is that bullocks need not be shod with iron shoe while used for long journey for pulling cart, unlike other breeds of draught cattle. The animals are not affected much if there is an outbreak of foot and mouth disease in that area.

Utility of the Bargur cattle

Mr. Nachimuthugounder is maintaining 150 cows, 20 calves and 2 bulls. His main income is through the sale of young males (one year old) . Annually he disposes of 30 of them and sells at an average rate of Rs.12,000 per pair. Selling is done during the festival "Gurunathasami" temple at Anthiyur usually in the Tamil month "Adi" (July-August). He never disposes of female calves. Males are procured by traders for rearing them

further up to 3 years and in turn a pair of grown up bullocks may fetch around Rs.35,000 (within 2 years of rearing). Bargur calves are in good demand in areas like Aathur and Thamampatti in Salem district.

Besides the dung of cattle is used for manuring his own field for raising cash crops viz. banana, turmeric etc. Monthly he is getting 6 tonnes of manure from his herd, which is valued at Rs1500 per load. For banana cultivation he completely replaced chemical fertilizers with 10 tonnes of cattle dung in one acre. When manure is given as basal dose then the banana / turmeric need not be given any top dressing with chemical fertilizers. He also observes that such manuring practice enhances early maturity of banana plantation at least by one month in red banana (instead of 13 months crop he harvests mature fruits at 12th month itself).



Grazing system

He employs 2 labourers to look after the herd and he himself looks after grazing if labourers some times do not turn up for work. He provides annual wage of Rs.30,000 per person. He takes the animals for hill grazing and he faces problems with forest department. In the forest, the grazing land has been encroached with an exotic weed species called as *Lantana camara*. He supplements animals with agricultural crop residues such as banana stem (after harvest of banana fruits), maize stubbles (after harvest of maize cob), sugarcane trashes, especially during summer i.e. March – June. He feeds 3 kg of fodder approximately to each animal when they do not get sufficient

grazing during these 3 months. He observed that animals relish vegetation like *Kurinchithalai*, *Malampul*, *Sevvarugampul*, *Karuoosipul*, *Malan kiluvai* etc. in the forests. He also believes that dried fallen leaves of bamboo gives cattle good stamina.

He proposes uprooting of *Lantana camera* bushes followed by planting of grass species such as Bamboo, *Kinangu*, *Seemarpul* which in turn suppress the growth of Lantana. However such model planting should be fenced with solar electric wire fencing so as to prevent wild elephants entering into the planted sites. He is following ethno-veterinary practices for treating diseases like *muttu adaippan*, diarrhoea, repeat breeding, intestinal worms, wounds, conjunctivitis and broken horns.

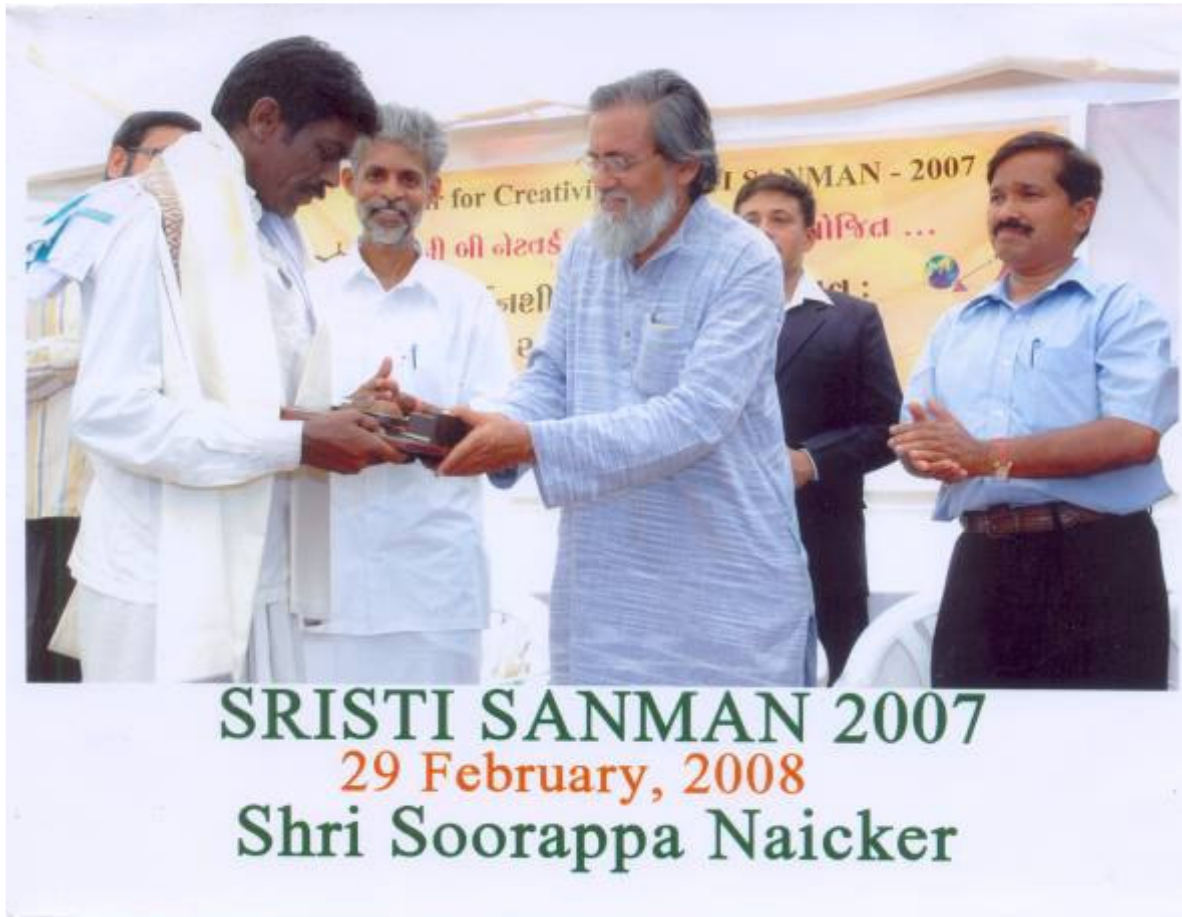
Recognition

Mr. Nachimuthugounder's father was invited to Delhi about 40 years ago to participate in the cattle show and his 'Bargur' cattle won second prize at that time (Kangayam cattle maintained by Pattagar of Palayakottai won the first prize) Now Bargur stock owned by Sri.N.Nachimuthugoundar and his bulls are one of the best in the breeding tract as told by Dr.Kandasamy, retired Professor of Animal Genetics,Veterinary College and Research Institute, Namakkal, a constituent college of Tamil Nadu Veterinary and Animal Sciences University, Chennai.

Address of the breeder

K.Nachimuthu Goundar,
Thonimaduvu Thottam,
Sangarampalayam village,
Anthiyur (via),
Bhavani Taluka, Erode District.
Tamil Nadu
Ph: 04256 – 291696.
Cell : 9095626909

Case 2: Herbal healing practices followed by Sri. Soorappa Naicker



Soorappa Naicker studied upto 5th std living in Koilnatham village situate in Burgur Forests in Andhiyur block of Erode district. He is a small farmer with 3 acres of land and he maintains 12 Bargur cattle. He learned many herbal healing practices from his grandfather and he is also well versed the flora in the forest area situated in Karnataka, Tamil Nadu border. His treatment methods are given below.

For all poisonous bites

Animals suffering due to poison bite show symptoms of discolouration of skin, hypothermia. For treating the affected animals roots of *Calotropis*, root of *Pandava erukku* (?), bark of *Athandangai* (?) are to be ground and administered internally. Alternatively, leaves of *Nochi* (*Vitex negundo*), *Gandhari milagai* (small size chilli capsicum), fruits with high pungency to be ground in hot water and administered internally.

Sevuttu Noi or oozing of pus from earlobes

Animals especially calves of buffalo noticed with pus from ears is locally known as ‘Sevuttu noi’ disease. It is treated with the extract of bark of white flowered Neerium (100 gm), gandhari chilli (small size capsicum fruits 12 number) after grinding has to be mixed in 100 ml of milk and poured into the ears. This treatment has to be performed twice a week and continued for 2 weeks.

Diarrhea in calves

Bark of *Suduvenai maram* (?), *Vengai maram* (*Pterocarpus marsupium*), *mathimaram* (*Terminalia arjuna*), *Negamaram* (?), *Vagai* (*Albizia lebbbeck*) and garlic (*Allium sativum*), ginger (*Zingiber officinale*), black pepper (*Piper nigrum*), cumin (*Cuminum syminum*) are to be taken in 2 litres of milk in a mud pot. This will lead to precipitation and become curd. After that daily butter milk and onion are to be added. From the whole lot of 50 ml of liquid is taken and administered orally for 8 days. This practice arrest watery diarrhea and the dung will become solid state.

For management of servicing bulls

In this forest village farmers maintain, indigenous type of cattle called ‘Bargur’ and ‘Malaimadu’. ‘Bargur’ breed has white tinges in red coloured background locally called ‘semmari’. For grey coloured type they call “Malaimadu” type. For developing good quality animals bulls are carefully selected and maintained. In order to increase the vigour and maintaining its serviceability the following treatments are followed.

- For ‘Semmmari’ type (Bargur cattle breed) of bulls, flowers of *Senbagam* (*Michelia champaca*) (3 numbers), matured coconut (3 numbers), raw rice (1 kg), jaggery (500 gm) are to be ground and then banana (‘monthan’ variety 3 numbers), grapes (500 gm), cow ghee (100 ml) are to be added in 3 litres of milk and thoroughly mixed together and administered orally. This has to be performed on Sunday and once in a year.
- For grey coloured bull (Malaimadu cattle type) flowers of Kattamalli aliassendumalli, Athamakkarai, Kamsakkarai (1 rhizome of tuber), Mathamasakkarai (3 rhizome), Bhoomi sakkarai (1 rhizome), matured Coconut (3 numbers), raw rice 1 kg, Jaggery 500 gm, cow ghee 100 ml are added in 3 litres of milk and mixed together thoroughly. This has to be administered orally only once in a year in a Sunday.

While giving this treatment the bull should not be allowed for service on the day of treatment.

For ectoparasites

Ecto parasites like ‘Unni’ (mites) are treated with exposure to smoke / fumigation made out of leaves / bark of Purasu (*Chloroxylon swietenia*), Vidathalai (*Dichrostachys cinerea*), Doopamaram (*Boswellia serrata*) (the bark exudates of the tree is used as incense stick or used for good odour smoke) and performed on new moon day.

For Sappai disease / black quarter

This disease is noticed during June, July. The disease is characterized with swellings in hind quarters, crepitating sound on pressure. The animal will die suddenly. For this *Kadukkai* (*Terminalia chebula*) (20 numbers), seeds ground after removing the kernel and to be mixed with lime (Calcium hydroxide), castor oil, latex of *Kalli* (*Euphorbia tirucalli*), are to be mixed together and branded over the sappai region (in the front of back quarter).

For any boils / swellings

Swellings or boils noticed in animals are cured with leaves of Puliyarai, *Jatropha* leaves are to be burnt over fire and mixed with curd and applied over the region.

For “kundisilai” disease

The cattle affected with “Kundisilai” have symptoms with nasal discharge and will not take feed and die within 3 days.

This disease is noticed after drying of grass due to long dry spell. For this animal is treated with grinding of “Veliparuthi (*Pergularia daemia*), black pepper, garlic, hot water and mixed in milk and administered orally.

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Appendix 2: Supporting bibliography

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Proceedings of Regional Workshop on “Traditional Livestock Keepers, Indigenous Knowledge and Biodiversity Conservation” organized by SEVA in collaboration with National Biodiversity Authority, at Madurai on 22 February 2008

Appendix 3: Note about the process

The Biocultural Protocol was established and recorded by the Lingayat community in Bargur Panchayat and around Andiyur block (Erode district, Tamil Nadu) during *Padhyatra* organized by SEVA on 26-31 December 2007 ; also during Regional Workshop on “Traditional Livestock Keepers, Indigenous Knowledge and Biodiversity Conservation” organized by SEVA in collaboration with National Biodiversity Authority, at Madurai on 22 February 2008 and at Burgur on 25-27 September 2009. It was facilitated by SEVA and League for Pastoral Peoples and Endogenous Livestock Development.