

## **Conservation of indigenous breeds of Cattle and Buffalo**

There are thirty seven recognized breeds of cattle in India, in addition to large number of non-descript cattle. In recent times, several of the indigenous breeds suffered decline mainly due to their becoming uneconomical. Draught breeds utility has decreased because of mechanization in agriculture.

The local breeds have following merits over exotic breeds viz:

1. Better disease resistance than exotic breeds
2. More suitable for low input management system
3. Survive better in local environment
4. Suitable for draught work

In addition, existence of superior indigenous breeds can provide valuable research inputs for developing superior breeds. It is therefore important that Indigenous breeds of cattle are conserved, developed and proliferated.

### **Conservation Strategies**

#### **(A) Breeding Policy**

The States may review their respective breeding policy so as to prioritize conservation of Indigenous breeds in their breeding tract and allowing no cross breeding of recognized indigenous cattle in the home tract of important and recognized indigenous breeds

#### **(B) Implementation of the Breeding Programme**

1. The State may consider region specific and breed specific breeding strategies, programmes and plans to implement the conservation programme.
2. The States may delineate and identify, in their respective breeding policies, the geographical boundaries of the areas where non-descript cattle should be upgraded by crossing with bulls of indigenous breeds. Once such areas are earmarked, no cross-breeding of non-descript cattle, other than with bulls of indigenous breeds, should be permitted.
3. The areas for cross-breeding of non descript cattle with exotic breed may be identified.

#### **(C) Promotion of Breeders organization**

##### **1. Breeding Farms**

The existing States breeding farms of indigenous breeds should be declared as germplasm repositories and used for production of bulls. Only pure breeding should be practiced at these farms

## **2. Gaushala**

Conservation efforts have mostly limited to institutional farms with small herd sizes, leaving larger parts of the breeding tract totally neglected. There are large number of Gaushala have quite sizable populations of purebred animal of Indigenous breeds but do not have the resources for maintaining and improving these animals. Such Gaushala may be supported to maintain indigenous breeds so that they can supply improved quality of germplasm for breeding. They should be provided with scientific and technical inputs and training for genetic evaluation

### **(D) Role of voluntary organization**

1. Breeder Association – without involvement and participation of farmer's it is not possible to conserve the breed. Improvement of Indigenous breeds can be taken up in collaboration with Breeders' association through selection of outstanding animals true to their breed types.
2. These Breeders' association can be encouraged to form a Federation at the State/District level to take up issues relating to conservation and development of respective indigenous breeds.

States may consider having State level awards for Breeders' associations and for progressive farmers who have contributed to conservation and development of recognized indigenous breeds.

### **(E) Use of Science and Technology**

Since the introduction of cross breeding programme, most of the techniques and methodologies for breed improvement have been used to produce cross bred cattle. The application of such technologies for propagation and improvement of indigenous breeds is a relatively rare phenomenon, one of the reasons for which may be the reluctance of the farmers, owning these breeds to accept new and established techniques for reproduction.

1. Technologies such as artificial insemination, Frozen semen production, progeny testing, embryo transfer technology should be used, after proper evaluation where ever required
2. National gene bank should maintain the germplasm in the form of semen & embryo. Regional gene banks should meet the requirements of National gene bank

**(F) Data Base**

1. A reliable data base should be developed with regard to all the details of Indigenous breeds, including their breeding tracts, numbers, characterization, gene make up, the institutional farm where they are being preserved and / conserved.
2. The national level data base for cattle and buffalo developed by NDDDB may be utilized for this purpose.
3. A breeding network should be set up by computerizing and net working all AI outlets, semen stations, breeding farm and Gaushala

**(G) Creation of Public Awareness**

1. Available information on different breeds should be published in the form of pamphlets, books, calendar etc. This will create awareness and motivate farmers to conserve the important breeds.
2. Some farmers are the proud owner of the popular breeds of their area. Such farmers, if encouraged through financial & veterinary help will help in preservation of breeds
3. Breeds shows should be arranged for local breeds and owners should be rewarded for maintaining pure local breeds. Publish success stories on local breed conservation and innovative utilization.

**Details of important recognized breeds of cattle and buffalo and their breeding tracts are given in Annexure-I and availability of Frozen Semen can find details in Annexure-II**

## Recognized indigenous breeds of cattle

S.No.	Breed	Breeding tract	Population(as per 2007 census)*
<b>Milch breeds</b>			
1.	Gir	Gujarat(Junagarh, Bhavnagar, Amreli Distt)	2,103,307
2.	Rathi	Rajasthan (Bikaner, Jaisalmer & Ganganagar Distt.)	924,087
3.	Red Sindhi	Pakistan(Karachi and Hyderabad Distt)	549,432
4.	Sahiwal	Pakistan (Sahiwal Distt), Ferozpur and Amritsar Distt. Of Punjab	457,405
<b>Dual Purpose Breeds</b>			
5.	Deoni	Maharashtra(Marathwada region) adjoining parts of Karnataka and AP	166,025
6.	Gaolao	Maharashtra(Wardha Distt), MP(Balaghat, Chindwara distt) Chhattisgarh(Durg, Rajnandgoan)	222,663
7.	Hariana	Haryana(Rohtak, Hissar, Jind distt),Rajasthan(Alwar, Bharatpur)	2,600,122
8.	Kankrej	Gujarat(Kutch, Mehsana, Ahmedabad, Kaira, Sabarkantha distt), Rajasthan(Barmer & Jodhpur)	3,887,152
9.	Krishna Valley	Karnataka(Belgam, Raichur, Bijapur distt) Maharashtra(Satara, Sangli, Solapur)	2,314
10.	Mewati	Rajasthan(Alwar, Bharatpur), Uttar Pradesh(Kosi, Mathura Distt)	75,427
11.	Ongole	Andhra Pradesh(Chittoor, Kurnool)	258,240
12.	Tharparker	Rajasthan(Jodhpur, Barmer, Jaisalmer)	557,679
<b>Draft Breeds</b>			
13.	Amrit Mahal	Karnataka (Hassan, Chikmagalur Chiteradurga)	98,169
14.	Bargur	Tamil Nadu (Erode Distt)	21,312
15.	Bachaur	Bihar (Sitamari, Madhubani, Darbhanga Distt)	451,659
16.	Binjarpuri	Orissa (Jajpur Subdivision Cuttack Distt)	46,680
17.	Dangi	Maharashtra (Nasik, Ahmednagar Distt.)	304,238
18.	Ghumsuri	Orissa (Cuttack Distt)	82,815
19.	Hallikar	Karnataka	2,196,698
20.	Kangayam	Tamil Nadu(Erode Distt)	316,114
21.	Kenkatha	Uttar Pradesh (Lalitpur, Hamirpur, Badnda Distt), Madhya Pradesh (Tikamgarh Distt)	185,886

22.	Kherigarh	Uttar Pradesh(Lakhimpur Kheri distt)	171,414
23	Kheriar	Orissa	
24	Khillari	Maharashtra (Solapur, Sangli Satara distt)	1,423,742
25	Malvi	Madhya Pradesh( Dewas, Ujjain, Sajaipur distt), Rajasthan(Jhalawar distt)	1,518,452
26	Nagori	Rajasthan(Nagaur distt)	837,344
27	Nimri	Madhya Pradesh ( Khandwa, Khargaoan and Barwani distt)	309,859
28	Motu	Orissa(Koraput distt)	702,347
29	Ponwar	Uttar Pradesh (Pilibhit distt)	24,072
30	Red Kandhari	Maharashtra (Nanded distt)	178,758
31	Siri	West Bengal (Darjeeling) and Sikkim	61,764
32	Umblachyery	Tamil Nadu (Thanjavur, Nagapattinam distt)	218,315
<b>Dwarf Breeds</b>			
33	Vechur	Kerala (Vaikam, Kottayam distt)	3,170
34	Punganur	Andhra Pradesh (Chittoor)	771
	Total		20,954,432

#### Indigenous breeds of buffalo

S.No.	Breed	Breeding tract	Population(as per 2007 census)*
1.	Murrah	Haryana(Rohtak, Hissar distt)	20,488,438
2.	Nili Ravi	Punjab(Ferozepur distt)	591,659
3.	Bhadawari	Uttar Pradesh (Agra, Etawah distt), Madhya Pradesh (Bhind, Gwalior distt)	729,013
4.	Jaffarabadi	Gujarat (Amreli, Junagarh, Bhavnagar distt)	1,843,848
5.	Marathwada	Maharashtra (Marathwada region)	183,238
6.	Mehsana	Gujarat(Mehsana, Ahmedabad)	3,376,196
7.	Nagpuri	Maharashtra (Vidharbha region)	142,765
8.	Phandharpuri	Maharashtra (Kohlapur, Sangli, Solapur distt)	272,802
9.	Surti	Gujarat (Kheda, Vadodra, Bharuch distt)	2,988,245
10.	Toda	Tamil Nadu (Nilgiris, Udumalpet, Coonoor distt)	54,755
11.	Banni	Gujarat (Kutch distt)	527,576
	Total		31,198,535

**Annexure-II**

**Statement showing the various breeds of Cattle & Buffalo bulls maintained at the Semen Stations in India.**

Sl.No	Name of the Semen Station	Indeginous	Exotic	Cross Bred	Buffallo
1.	Chakganjaria, <b>UP</b>	Haryana, Sahiwal	HF, JR	HFx and JRx	Bhadawari, Murrah
2	Babugarh, <b>UP</b>	Haryana	JR	--	Murrah
3	Dalpatpur <b>UP</b>	Sahiwal, Haryana	HF	HFx	Murrah
4	ABC Salon, <b>UP</b>	Sahiwal, Tharparkar, Rathi, Haryana, Red sindhi	HF, JR	HFx and JRx	Murrah, Bhadawari
5	Khanapara, <b>Assam</b>	--	JR, HF	JRx and HFx	Murrah
6	Rishikesh, <b>Uttrakhand</b>	Red Sindhi, Sahiwal	HF, JR	HFx and JRx	Murrah
7	Kirkee, Pune <b>Maharashtra</b>	Khillar	HF, JR	HFx and JRx	Murrah, Pandrapuri
8	Auragabad <b>Maharashtra</b>	Deoni, Red Khandari	HF, JR	HFx and JRx	Murrah
9	Nagpur <b>Maharashtra</b>	Sahiwal, Goulav	JR	JRx	Murrah, Nagpuri
10	BAIF, <b>Maharashtra</b>	Tharparkar, Gir, Krishnavalley, Sahiwal, Hallikar, Amrit Mahal, Dangi, Khillar,	HF, JR	HFx and JRx	Bhadawari, Murrah, Surti, Jaffrabadi, Banni
11	Jagudhan, <b>Gujrat</b>	--	HF	HFx	Mehsana, Banni
12	Amul, <b>Gujrat</b>	Gir	HF	HFx	Murrah
13	SAG, Bidaj, <b>Gujrat</b>				
14	Patan <b>Gujrat</b>				
15	Banas <b>Gujrat</b>				
16	Shillong	--	HF, JR	HFx and JRx	--
17	Bhopal, <b>MP</b>	Sahiwal, Malvi, Nimari, Tharparkar, Gir, Kenkatha	HF, JR	HFx and JRxx	Murrah, Bhadawari, Jaffrabadi.
18	Cuttack, <b>Orissa</b>	Haryana, Red Sindhi	JR	JRx	--
19	Ropar, <b>Punjab</b>	Sahiwal	HF, JR	HFx	--
20	Nabha, <b>Punjab</b>	Sahiwal	HF,	HFx	Murrah, Nili Ravi

21	Bhattia, <b>Punjab</b>	--	HF	HFx	Murrah
22	SSCC, H'ghatta <b>Karnatak</b>	Amrit Mahal. Hallikar	HF,JR	--	--
23	CSCC,Dharwad <b>Karnatak</b>	Deoni, Khillar	HF,JR	--	Murrah,Surti
24	SLBTC,H'ghatta <b>Karnatak</b>	--	HF,JR	--	Surti, Murrah
25	Shillong, <b>Meghalaya</b>	--	HF,JR	HFx and JRx	--
26	Karimnagar, <b>AP</b>	--	--	JRx	Murrah
27	Vishakapatnam <b>AP</b>	Ongole	JR	JRx	Murrah
28	Nandyala <b>AP</b>	Ongole	--	JRx	Murrah
29	Banavasi <b>AP</b>	--	HF,JR	Jrx	Murrah
30	Matupatti, <b>Kearla</b>	--	HF,JR	HFx and JRx	--
31	Dhoni <b>Kearla</b>	Red sindhi, Gir, Kankrej,Sahiwal, Kankrej,Rechur, Kasrgod Dwarf, Rathi	--	HFx and JRx	--
32	DLF,Ooty <b>TN</b>	--	HF,JR	HFx and JRx	--
33	NJF,Ooty <b>TN</b>	--	HF,JR	HFx and JRx	==
34	DLF,Hosur <b>TN</b>	Red sindhi, Kngayam, Pulikulam,Barbur	--	JRx	--
35	Eicchankottai, <b>TN</b>	Umblechari	JR	JRx	Murrah
36	CFSPTi,H'ghatt <b>Karnatak</b>	Sahiwal	HF,JR	--	Murrah
37	NSS, KMF,H'ghatt <b>Karnatak</b>	-	HF and JR	--	Murrah
38	Chitale Farm,Sangli,Maharshtra				