

## **Alambadi :**

Alambadi cattle is a wonderful indigenous breed that derives its name from a village called Alambadi on the banks of river Kaveri, in the Dharmapuri district of Tamil Nadu. In this tract, there are plenty of uncultivated forest lands that allow the cattle an abundant pasture and unrestricted roaming grounds. Alambadi cattle are also found in the Erode district of Tamil Nadu. Raised on the hilly regions of Tamil Nadu, the breed survives on the grazing in the forest regions. The Alambadi cattle in the North are said to be the descendants of the Hallikar breed of Mysore.

**Alambadi** is mostly bred by Konga Vellalas, Lingayats, Vanniyars and Vokkaligas of the region, in the hilly forest areas of the upper Kaveri basin Mettur (Salem dt.) Pennagaram, Dharmapuri (both in Dharmapuri dt.) Kollegal, Bangalore rural (both in Karnataka state). It is one of the rarest of breeds in the world. Alambadi is capable of existing even in extremely hot temperatures and its disease resistance capacity is remarkable. Today, this breed has become almost extinct.

The cattle are brought back to villages during harvest times when the harvested fields provide pasture for some time, and the cattle supply the necessary manure for the fields. This breed of cattle mostly exists on grazing and dry fodder only.

### **Characteristics:**

- The cattle are medium or large sized with deep but compact body.
- The frame is loose with well-arched ribs, heavy shoulders, and tight skin.
- The colours of the body vary in grey, dark grey, black, and fawn shades. Some are flesh-coloured while others have dark coloured skin with black muzzle.

- They have white markings on the forehead, limbs, and tail.
- The head is dark and moderately long with a narrow face.
- They have sweeping horns that curve backwards and end in sharp points.
- The forehead is prominent and bulging.
- The neck is short and thick.
- The dewlap is broad and thick.
- The ears are small and pointed.
- The hump is fairly large and well-developed.
- The penis sheath is generally small to medium.
- The tail is medium long and tapering to a black switch.
- The legs are short but strong.
- The feet are large and hard with prominent coronary band.
- The hind quarters are narrow and sloping from the croup to the tail.
- Height averages at 124 cms. for males and 115 cms. for females.
- Body length averages at 134 cms. for males and 124 cms. for females.
- Body weight averages at 347 kgs. for males and 282 kgs. for females.
- Average chest girth is 167 cms. for males and 155 cms. for females.
- The calving interval varies from 16 to 24 months.

### **Amrit Mahal :**

Amrit Mahal breed of cattle belongs to the State of Mysore in Karnataka. Amrit Mahal has a majestic appearance. People refer

them as the mighty Amrit Mahal with swords for horns. They originate from the Hallikar breed which was cross bred with Hagalavadi and Chithradurg.

In mid-1800, the rulers of the erstwhile Mysore State developed Amrit Mahal breed. The breed was to suit the local area. The bullocks were classified as gun bullocks, pack bullocks, etc. to transport war equipment. Amrit Mahal means the department of milk. Unfortunately, these cows being poor milk-yielders, are instead classified as draught breed.

## **Characteristics:**

- Amrit Mahal cattle has a color of various shades of gray. These shades vary from white to black with white-gray markings on the face and dewlap. The muzzle, feet and tail switch are generally black, but lighter in older animals.
- A well-shaped head which is long and tapering towards the muzzle.
- The forehead bulges out slightly and is narrow and furrowed in the middle.
- The horns emerge from the top of the head. The horns are fairly close together in an upward and backward direction. They terminate in sharp black points.
- The eyes have bloodshot appearance.
- The ears are small, in horizontal position, yellow inside and taper to a point.
- The dewlap is thin and does not extend very far.
- The sheath and navel flap are very small and close to the body.
- The hump is well-developed and shapely in the bulls, with about 8 inches height.
- The body is compact and muscular with well-formed shoulders and hindquarters.
- The neck is strong and fairly long, back is level, with broad loins and level rump.
- The legs are of medium length and well-proportioned.

- The fetlocks are short and the hooves are hard, close together and small.
- The skin is thin, mellow and jet black in colour, with short glossy hair.
- The average height of this breed is 50 to 52 inches.
- The average lactation yield is approximately 1000-1200 kilograms.
- The average calving interval is approximately 600 days.

### **Banni:**

Banni buffaloes are also known as “Kutchi” or “Kundi”. The breeding tract includes the Banni area of Kutch district of Gujarat. The breed is maintained mostly by Maldharis under locally adapted typical extensive production system in its breeding tract. Banni buffaloes are trained to graze on Banni grassland during night and brought to the villages in the morning for milking. This traditional system of buffalo rearing has been adapted to avoid the heat stress and high temperature of the day. Banni buffalo has unique qualities of adaptation such as the ability to survive water scarcity conditions, to cover long distances during periods of drought and disease resistance. Banni buffalo is mostly black in colour. Copper coloured animals are also seen. Forehead is elongated and straight with no slope towards horn base. Horns are tightly coiled vertically with single to double coiling. The body is medium to large, compact, and generally covered with hairs. Dewlap is absent and naval flap is medium. Udder is well developed, round and squarely placed. The hind and fore quarters are uniformly well developed, whereas typically whole udder looks like four equal divisions with teats well attached to each quarter. Majority of animals have conical teats with round and pointed tips. Banni buffaloes yield on an average 2857.2 kg milk in a lactation with fat % of 6.65. The lactation yield ranges from 1095 Kg to 6054 Kg.

### **Bargur:**

Bargur is a dual-purpose cattle breed, found around the Bargur hills in Anthiyur Taluka of Erode district in Western Tamil Nadu. This breed has been generally raised in herds, exclusively by the Kannada speaking Lingayats of the Bargur region. The Bargur

cattle are raised especially for carrying out agricultural operations in the hilly terrain and are well-known for speed, endurance and their trotting ability. These are very hardy animals and are known to be aggressive and fiery in their disposition. They are also cautious in behaviour and tend to remain away from strangers.

This small and fiesty animal is also known as Semmarai in Tamil Nadu, and is a favourite during the "*Jallikattu*" – bull taming tradition played in Tamil Nadu, as part of the Pongal celebrations (Harvesting Festival).

The cows are not very good 'milkers' but their milk is known to have high nutritive and medicinal value. Possibilities are being explored for enhancing the milk yield of these cows through scientific means. Researchers are carrying out extensive plans for the selective breeding of the cattle, in order to double the milk yield from the present 2 to 3 litres per day.

## **Characteristics:**

- Bargur cattle are of medium size with compactly built body and tight body skin.
- The cows and bulls are usually red coloured with white patches. Full white and reddish-brown complexions are also found at times.
- The coat colour varies from cherry red to light red and the skin is red in colour.
- The hair is short, straight, and fine and the hair colour is brown and white.
- The muzzle and eyelashes are mostly brown in colour.
- The head is well-shaped and long and tapering towards the muzzle.
- The forehead is moderately broad and slightly prominent.
- The ears are short and horizontal while the horns are thin.

- The horns are light brown in colour, emerge closer at the root and are inclined backward, outward and upward with a forward curve that is sharp at the tip.
- The hump is moderate-sized and the ribs well-arched.
- The dewlap is well-marked, short and extends up to the sternum.
- The sheath is fairly tight and tucked up to the body.
- The legs are medium in length while the tail is rather short with a brown switch.
- The hooves are brown in colour. Also, black coloured hooves are also found amongst the animals.
- The udder is small and closely attached to the teat.
- The teats are small, cylindrical in shape and well set apart with pointed tips.
- There is a tight navel flap, almost inconspicuous in the cows.
- The average height at withers of a male is 126 cm and a female is 116 cm.
- The average body length of a male is 126 cm and of a female is 115 cm.
- The average chest girth of a male is 139 cm while that of a female is 124 cm.
- The milk yield of the Bargur cows does not exceed two to three litres a day.
- Average milk production of the cows is 350 kgs per lactation and ranges from 250 to 1300 kg per lactation.

These cattle are most often maintained in extensive management system, being raised in forest areas in semi-wild conditions. They are usually housed in enclosures called 'Pattys' in groups of 50 to 200 animals. This hill cattle survive under almost zero-input conditions since they are mostly reared inside the forest areas.

The Dangi Breed has taken its name from a tract of the country in Gujarat State known as Dangi, which is the home tract of this breed. The breed is considered to be an outcome of breeding between the local and Gir cattle. This tract comprises the hilly and

heavy rainfall areas of Ahmednagar, Nasik, Thane of Maharashtra and Dangs and Surat districts of Gujarat. The animals of this breed thrive in heavy rainfall tracts of Western Ghats and in the coastal areas (North Konkan patti) as well where the climate is generally pleasant.

Dangi is a medium-sized, fast-working draught animal. The cattle of this breed are docile and have an energetic and vigorous appearance. The bullocks are utilized for all general agricultural work and are extensively used for paddy cultivation and road transport in the Ghat areas and Konkan patti.

The cows are poor milkers. The average age at first calving varies from 4 to 5 years. The average lactation yield varies from 550 to 680 kg, whereas the well-cared and well-fed cows have yielded up to 1,590 kg.

The cattle of this breed are docile and have an energetic and vigorous appearance. The animals subsist mostly on grazing and on agricultural by-products. These are extremely hardy animals and stand well even under the heavy rainfall conditions.

### **Characteristics:**

- This is a big-boned, low-set, well-built breed with a rather loose skin.
- The color of this breed is black and white in patches.
- The head is usually small with a comparatively large and protruding forehead, with a prominent poll.
- The horns are short and thick, and sometimes like blunt stubs. They spring backwards from their roots, and then upwards and forwards. The fancy breeders train the horns to get a particular shape.
- The eyelids, inside of the ear, switch of the tail, skin surrounding the vulva and teats in females, and scrotum in males are black.

- The eyes are bright, large and deeply set in the sockets with black eyelids. The upper lids have loose skin folds.
- The face is long with slightly loose skin and the muzzle is jet black.
- Neck is usually short and thick with very prominent hump in males.
- Dewlap is thick, pendulous with folds and extends from lower jaw to navel flap.
- Chest is medium, deep and well developed.
- Shoulders are broad and clean set.
- Forelegs are set well apart, straight and medium in size, with black strong hoofs and a little interdigital space.
- The pasterns are long and sloping.
- The barrel is long, rounded, capacious, and well developed.
- The back is straight but dipping slightly towards the hump.
- The ribs are broad and well sprung.
- The navel flap in both the sexes is long and pendulous.
- The hind-quarters are fairly broad, muscular and well developed.
- The hips are fairly wide and slightly sloping.
- The thighs are flat and muscular while the inside of the thighs is slightly curved with plenty of room between the legs.
- The buttocks are muscular and angular but not well rounded.
- The tail is of medium length and thick with black switch.
- Legs are well set, placed apart with strong black hoofs.
- The hoof is particularly hard.
- The skin is loose, soft and pliable with glossy hair.
- The udder is medium sized with black teats, which are fairly big. The skin of the udder is black.
- Ears are short, fairly broad and black from inside. Long black hair line the fringe of the ear.
- These are low milk-yielders with the average peak yield of 2.9 liters.
- Height averages at 127 cms. for males and 119 cms. for females.



- Body length averages at 118 cms. for males and 102 cms. for females.
- Body weight averages between 364 to 455 kgs. for males and 270 to 365 kgs. for females.
- Average chest girth is 173 cms. for males and 157 cms. for females.

It is interesting to note that in *Kautilya's Arthashastra* a complete section is devoted to the rearing of cattle. Nevertheless, it was only in the 17th century that written records were maintained, and almost a century and-a-half later cattle breeding acquired an independent importance with printed Herd Books for cattle beginning to appear. Since inception the Indian Council of Agricultural Research have recognized the need for the maintenance of pedigree Herd Books and the Dangi Breed was promptly defined under its scheme.

## ➤ **DEONI**

Deoni is a draught type of animal believed to be developed from a strain descended from the mixture of Gir, Dangi and local cattle. The breed developed its name from the place of origin i.e. Deoni taluk of Latur district in Maharashtra. The breed is also known as "Surti", "Dongarpati", "Dongri", "Wannera", "Waghyd", "Balankya" and "Shevera". The breeding tract lies in the Balaghat range of Sahyadri hills extending from Kannad taluk of Aurangabad to Deglur taluk of Marathwada region of Maharashtra state. The actual place of origin is Deoni, Udgir and Ahmadpur taluks of Latur district. Body colour is usually spotted black and white. This breed has three strains viz. Balankya (complete white), Wannera (complete white with partial black face) and Waghyd or Shevera (black and white spotted). Small sized horns emerge from the side of the poll behind and above the eyes in outward and upward direction. The tips of the horn are blunt. The breed is characterized by drooping ears and prominent & slightly bulging forehead. Deoni bullocks are preferred for heavy works and bullocks can effectively be used

even up to 12 years of age. Animals are maintained on semi-intensive management system and on grazing. The average milk yield per lactation of Deoni is 868 kg (ranging between 638 to 1229 kg) with an average milk fat is 4.3 (ranges from 2.5 to 5.3 %).

## ➤ **GIR**

The Gir or Gyr is an Indian breed of zebuine cattle. It originated in the Kathiawar peninsula in the state of Gujarat, and the name of the breed derives from that of the Gir Hills in that region.[2]:187 Other names include Bhodah, Desan, Gujarati, Kathiawari, Sorthi and Surti.

These cattle were exported to Brazil from the early twentieth century, and the Brazilian Gir numbers about five million head; selective breeding since the 1960s has led to the development of separate dairy (Gir Leiteiro) and beef strains.

The Gyr originated in the Kathiawar peninsula in the state of Gujarat the name of the breed derives from that of the Gir Hills in that region.[2]:187 Its traditional breeding range extended into the Amreli, Bhavnagar, Junagadh and Rajkot districts of the state. It was known by several different names, among them 'Bhodah', 'Desan', 'Gujarati', 'Kathiawari', 'Sorthi' and 'Surti'.

It has been used locally in the improvement of other breeds including the Red Sindhi and the Sahiwal. It was also one of the breeds used in the development of the Brahman breed in North America. In Brazil and other South American countries, the Gir is used frequently because, as a *Bos indicus* breed, it is resistant to hot temperatures and tropical diseases. It is well known for its milk producing qualities and is often bred with Friesian cows to make the Girolando breed.

## Characteristics:

The Gir is distinctive in appearance, typically having a rounded and domed forehead (being the only ultraconvex breed in the world), long pendulous ears and horns which spiral out and back. Gir are generally mottled with the colour ranging from red through yellow to white, black being the only unacceptable colour. They originated in west India in the state of Gujarat and have since spread to neighbouring Maharashtra and Rajasthan.

Cows average 385 kg in weight and 130 cm in height; bulls weigh 545 kg on average, with a height of 140 cm. At birth, calves weigh about 20 kg. In India in 2000 the Gir numbered about 917000, or 37% of the 2.5 million cattle population of the Saurashtra region of Gujarat. In 2010 the population in Brazil was estimated at approximately five million. **Use:** The average milk yield for the Gir in India is 2110 kg per lactation, with approximately 4.5% fat.

## Hallikar

Hallikar is a native breed of cattle that has originated from the former princely state of Vijayanagar, a part of Karnataka. This breed is predominantly found in Mysore, Mandya, Hassan, Bangalore, Kolar, Chitradurga and Tumkur districts of Karnataka.

These are also known as the Mysore breed. It is said to be one of the best draught breeds of South India. Most of the current breeds found in South India have originated from the Hallikar, including the Amrit Mahal breed of cattle.

## Characteristics:

- This breed is best known for its draught capacity and its trotting ability.

- The colour of this breed range from gray to dark gray with deep shadings on the fore and hind quarters. They also sport light gray markings on the face, dewlap and under the body.
- These animals are medium sized and muscular, and have prominent and seemingly bulging foreheads.
- Their bodies are long and compact with long and slender legs.
- Their faces are long and taper towards the muzzle, the colour of which ranges from grey to black.
- They have long, vertical and backward bending horns.
- The males have comparatively large humps.
- These animals have thin and moderately developed dewlaps.
- The sheath is very small and tucked up with the body.
- The tail is fine with a black switch reaching a little below the hocks.
- The adult males and females weight around 340 and 227 kgs respectively.
- The age at first calving ranges from 915 to 1,800 days.
- The lactation milk yield averages to around 540 kgs and the fat content averages to about 5.7%.
- The length of lactation averages to about 285 days and the average calving interval is around 600 days.

These cattle are bred both by professional breeders and cultivators. A few families in each village have been breeding these cattle for generations. To develop this breed, the State of Karnataka has undertaken a policy of selective breeding.

In Turuvekere (in Hassan District), the Government farm has a herd of Hallikar bulls and cows. Also, in Hesaraghatta, the Government has maintained nearly 15 Hallikar bulls. The cattle are maintained in a semi-intensive management system by professional breeders.

## Haryana

Haryana, is a native Indian cattle breed used for draft purposes in the northern parts of India. This breed originated from from Rohtak, Hisar, Jind and Gurgaon districts of Haryana.

Besides the distribution of this breed in its traditional breeding tract and other adjoining areas, these animals were also reared in the erstwhile princely States of Nabha, Patiala, Jaipur, Jodhpur, Alwar, Loharu and Bharatpur, Meerut, Bulandshahar and Aligarh districts of Western Uttar Pradesh.

### Characteristics:

- They have strong, proportionate bodies and are compact and graceful.
- The body colour is generally white or light grey; the bullocks are dark grey coloured.
- The head is long and comparatively thin and is carried high.
- The forehead is flat and bony with prominence in the centre of poll.
- The face is long and narrow with black, bright eyes and black muzzle.
- The ears are small and sharp, and close to body.
- The neck is long and slender.
- The dewlap is present in this breed while the naval flap is absent.
- The males have larger shoulder hump is and short penis.
- The horns are glossy and smooth and somewhat horizontal, growing longer, curving upwards and inwards in the bullocks.
- The tail is thin, short, and tapering towards the end with a black switch reaching just below the hocks.
- The limbs are sturdy, moderately long and thin and hooves black and shaped.
- The pin bone is prominent and far apart in females but close in males.

- The females have prominent teats, and the udder is well developed, capacious, extended well forward; and the veins over udder are prominent.
- Average body weight of male is 430 kgs while that of female is 310 kgs.
- The height at withers of a male is 132 – 155 cm and a female is 127 – 140 cm.
- Average body length of a male is 141.02 cm and of a female is 139.2 cm.
- Average heart girth of a male is 173.96 cm while that of a female is 169.8 cm.
- Age at first calving is 40 – 61 months and inter-calving period is 13 – 18 months with a gestation period of 290 days while lactation period averages to 272 days.
- Milk production per lactation is 1400 – 2300 Kg and average milk fat: 4.3 – 5.3%.

Haryana breed is said to have been evolved by combining several native breeds and is a dual-purpose breed. It is well suited for transport as it can pull a one-ton load at 2 miles per hour and can cover 20 miles a day. The females are primarily meant for breeding of oxen, but they are also milked.

This indigenous breed of cattle is alarmingly close to extinction due to the trend for crossbreeding cattle for high yield of milk and inclination towards rearing buffalos. Pedigree herds are maintained at some Government farms. There are Goshalas which are rearing the abandoned, culled cows. At present, the estimated population of this breed is around 16.5 lakhs.

Initiatives taken by HLDB to implement Haryana Pedigree Selection project have developed much interest among the farmers and they have started appreciating the efforts of HLDB for improving the indigenous breeds of cattle. The government would provide quality bulls of these breeds to farmers at highly subsidized rates.

## Kangayam :

The Kangayam or Kangeyam is an Indian breed of draught cattle from the state of Tamil Nadu, in South India. Its area of origin is Kongu Nadu, the region surrounding Coimbatore, close to the border between Tamil Nadu and Kerala, but it is distributed over a considerably wider area. The breed name derives from that of the town of Kangeyam. It may also be called Kanganad or Kongu

The Kangayam is a traditional draught breed of [Tamil Nadu](#). It is not closely related to the other draught breed of the state, the [Umblachery](#), but may have some influence from the [Ongole](#).<sup>[5]:214[3]:211</sup> Its area of origin is the [Kongu Nadu](#) region, the western districts of Tamilnadu surrounding [Coimbatore](#), close to the border between Tamil Nadu and [Kerala](#),<sup>[8][5]:214</sup> but it is distributed over a considerably wider area;<sup>[6]:410</sup> the name of the breed derives from that of the town of [Kangeyam](#) in [Tiruppur District](#).<sup>[7]</sup>

*Nallathambi Sarkarai Mandradiyar*, a [pattakkaarar](#) from Palayakottai village in the present-day [Tiruppur district](#) was responsible for shaping the present-day Kangayam bull. In the 1920s this family had involved in the selective breeding of this cattle, without altering the purpose to increase its charm and beauty.<sup>[9][4]</sup>

Before Independence of India, the erstwhile [Government of Madras](#) took steps to popularise this breed. In 1942, 'Kangayam Cattle Improvement Scheme' was implemented by Imperial Council for Agricultural Research. After Independence, with the help of Five Year Plans, the breeding and adjoining tracts of Kangayams were improved.<sup>[4]</sup>

In 1940s, the population of the breed was around 3400 000, reduced to 479000 in 1979 and 242 000 in 2003.<sup>[5]:214</sup> In 2022 a total population of between 127500 and 152500 head was reported to [DAD-IS](#).<sup>[2]</sup>

It has been exported to Brazil, where it is called the **Cangaian**.<sup>[10]</sup>

## **Characteristics**

Kangayam cattle are valued for their moderate size, robust nature, and impressive athleticism, making them highly sought-after as draft animals. The breed's cows are generally not known for their milk production capabilities, but for other purposes.

## **Body Traits**

The Kangayam is of medium size, with a height at the withers of some 125–140 cm and a body weight of 340–525 kg; two body types are described, a larger and a smaller.

With a thick and short neck, a short and broad back, and well-sprung ribs, the Kangayam breed displays a compact body structure. The quarters have a subtle droop, while the dewlap extends only up to the sternum, remaining thin. The sheath is neatly tucked against the body, and although the hump in bulls is well-developed, it retains a firm appearance. The breed's hair is fine and short, and the skin possesses a dark pigmentation and a delicate texture. A moderately long tail, featuring a black switch that extends well below the hocks, completes the breed's physical traits.



The two variations of this breed exhibit remarkable strength and agility, boasting compact bodies and sturdy, short legs with robust hooves. In the smaller variety, the horns are positioned relatively straight, with a slight backward curve. Conversely, the larger variety showcases longer horns that curve outward and backward, nearly forming a complete circle as they approach the tips. The breed's head is proportionate to its body, featuring a modest size and a straighter profile compared to most Mysore-type cattle. The erect and pointed ears are small in size, while the eyes, adorned with black rings, are prominent and dark.

## **Food habits**

Korangaadu, a Kongu Tamil word for dry-grass silvipasture land is most suitable landscape for this breed. The staple food of this breed that grow in this region are Kollukattaipul (*Cenchrus ciliaris*), Vennampul (*Trachys muricata*), Ottampul (*Setaria verticillata*) and legumes such as Naripayathan Kodi (*Phaseolus trilobus*). The pods that fall from the Vellai Velan tree (*Acacia leucophloea*) are the supplementary fodder.

Poochi Kaalai (a stud bull) is selected based on its height, the length of its legs, and the formation of its hump. When the bulls attain a moderate level of dentition around three years of age, they are left to

cover the heifers to get the best offspring. The cows usually calve 12 times in their lifecycle.

## **Color**

The calves are red when born but change to grey by the age of two; cows are grey or dark grey, bulls are darker and may be black on the head and foreparts. The colour of cows and oxen fades as they age, and cows may become completely white.

Kangayam cattle primarily exhibit gray or white coloration. Male individuals typically display a gray hue with black or dark gray patches on the head, neck, hump, and quarters. On the other hand, cows predominantly possess white and gray coats, often adorned with distinct markings on the knees and above the fetlocks of all four legs. Calves exhibit shades of light or dark brown, with gray or white areas on the inner thighs, ears, and forelegs. Occasionally, gray or white rings can be observed on the pasterns and fetlocks. As heifers reach two years of age, they transition to a gray or dark gray color, which persists into maturity. However, as the animals age beyond maturity, their color fades, eventually turning white. Male calves gradually become dark gray or iron gray, with intensified black shading on the head, neck, hump, dewlap, forequarters, and hindquarters. Castrated males, however, exhibit a gradual fading of this coloration.

## **Kankrej**

Also Known by: *Bannai, Nagar, Talabda, Vaghiyar, Wagad, Waged, Vadhiyar, Wadhia, Wadhir, Wadia.*

The Kankrej breed of cattle gets its name from a territory of that name in North Gujarat of Bombay Province, India. The breed comes from southeast of the Desert of Cutch in western India, particularly along the banks of the rivers Banas and Saraswati which flow from east to west and drain into the desert of Cutch.

In Radhanpur State, which is adjacent to the Kankrej tract, the breed is known as Wadhia. In Cutch State it is known as Wagad or Wagadia, taking its name from the community of herdsmen who breed these cattle.

### **Characteristics**

The Kankrej is one of the heaviest of the Indian breeds of cattle.

Color varies from silver to gray to iron gray or steel black. Newly born calves have rust red-colored polls, this color disappearing within 6 to 9 months. Forequarters, hump and hindquarters are darker than the barrel, especially in males. The switch of the tail is black in color. The forehead is broad and slightly dished in the center. The face is short, and the nose looks slightly upturned. The strong lyre-shaped horns are covered with skin to a higher point than in other

breeds. The ears are very characteristic, being large, pendulous and open. The legs are particularly shapely and well-balanced and the feet small, round and durable. They are active and strong. The hump in the males is well-developed and not so firm as in some breeds. The dewlap is thin but pendulous and males have pendulous sheaths. Pigmentation of the skin is dark, and the skin is slightly loose and of medium thickness. Hairs are soft and short.

The Kankrej cattle are very highly prized as fast, powerful draft cattle. They are also fair producers of milk. These cattle are resistant to Tick fever, and they show very little incidence of contagious abortion and tuberculosis. It has also been observed that the red color is recessive.

### **Kasaragod :**

Kasaragod dwarf or *Kullan* is one amongst the three prime dwarf cattle in India, the other two being Malnad Gidda and Vechur breed of cattle. Kasaragod dwarf is mostly found in Kasargod, the northern-most district of Kerala, flanked by a vast coastal area in the West, plains in the South and hilly tracts towards the North. The breed is also found in Mangalore, Coorg, and some other parts of Karnataka. Some centuries ago, this breed of cattle was known as Sahya Pashu (Sahyadri Hill Cows) and was also found in Kannur and other parts of Kerala.

This breed is small-sized, friendly and understanding, and is well adapted to the hot and humid climate of Kerala. It possesses high heat tolerance and disease resistance, and can survive on kitchen scraps and jungle forage. This breed is also less susceptible to mastitis, a common udder infection.

Kasaragod Dwarf breed is in much demand due to the popularity of zero-budget farming. Those who know this breed are confident that conservation of these cattle could actually help the agrarian communities to deal with their problem of sustainable progress, and could also play a vital role in the growth and development of rural areas.

This breed has not been included in the list of India's 41 native cattle breeds that have been documented by the National Bureau for Animal Genetic Resources (NBAGR) Karnal, Haryana though moves have already begun to get this breed included in the list of native cattle breed of Kerala.

### **Characteristics:**

- The cattle are diminutive yet well-proportioned. .
- They are usually dark-skinned, with a uniform coat of black or varied shades of chocolate, brown, or white. Spotted ones are also seen.
- The muzzle colour is black for majority of the cattle.

- The eyelids, tail switch, hoofs, and horns are mostly black.
- The horns are mostly short or medium sized, curved upward and outward with variations in the horn length and shape.
- The forehead is straight.
- The ears are medium in length with horizontal orientation.
- The udder is bowl shaped and small.
- The teat colour is mostly pink though black teats are seen in black cows.
- The tail is long and almost touching the ground. The tail switch is mostly black in colour, though brown and white colours are also noticed.
- Height averages at 107.3 cms. for males and 95.83 cms. for females.
- Body length averages at 134 cms. for males and 124 cms. for females.
- Body weight averages at 194.3 kgs. for males and 147.7 kgs for females.
- Average chest girth is 133.1 cms. for males and 124.4 cms. for females.
- The calving interval varies from 15 to 18 months.
- It requires about 2 kgs of feed per day while its average milk yield is around 1 litre per day. The calves weigh only 10.5 kg at birth.

The Kasargod Dwarf Conservation Society was established in 2010 with objective of improving Kasargod dwarf breed. Currently more than 200 breeders and organic farmers are associated with this initiative.

Organic farmers in north Kerala are determined to conserve and popularize this diminutive breed of cattle. A positive development is that Bela Cattle Farm in Badiadukka panchayat in Kerala is now being developed as a research centre under the Central Veterinary University to study, research and popularise this rare breed of Kasaragod Dwarf.

### **Kenkatha :**

Kenkatha or Kenwariya breed hails from the provinces of Bundelkhand in Uttar Pradesh, along the banks of the river Ken and the Vindhya ranges in Madhya Pradesh. This breed is named after the river Ken. Its breeding tract lies along the banks of river Ken in Panna, Chhatarpur and Tikamgarh districts of Madhya Pradesh and in the Lalitpur, Hamirpur and Banda districts of Uttar Pradesh.

This is a breed which is known for its ability to survive in rough environments. Due to the hilly nature of the region and poor feed resources, only animals that can cover long distances and have strong feet can thrive in this region. The bullocks are small but sturdy and are

good for cultivation in rocky areas. They are also popular for light draught on road. Nevertheless, the Kenkatha cow is seen to be good enough for meeting consumption requirements of small families.

These cattle are maintained under the extensive management system. Cows and the young stock are maintained only on grazing while bullocks are usually fed good quality straws. They are known for their ability to thrive on poor feed resources. Animals have to cover long distances in search of grazing pastures. Straws and husks from crops are utilized as cattle feed. Only few animals are maintained by each cultivator. Pasture is scanty and generally consists of coarse grasses of low nutritive value.

### **Characteristics:**

- These animals are small but compactly built, with sturdy and powerful bodies.
- The complexions contain various shades of grey and black, and rarely, white, ranging from grey on the barrel to dark grey on the rest of the body.
- The head is short and broad and the forehead is dished.
- The ears are sharply pointed and do not droop.
- The horns emerge from the outer angles of the poll in forward direction and end in sharp points.
- The back is straight but the quarters are drooping.



- The limbs are short but powerful and the feet are hard.
- The hump is well developed.
- The sheath is somewhat pendulous and ends with a black tip.
- The dewlap is moderately heavy.
- The tail is of medium length with a black switch reaching below the hocks.
- Average body height at withers of a male is 127 cms and a female is 120 cms.
- Average body length of a male is 119 cms and of a female is 114 cms.
- The average chest girth of a male is 178 cms while that of a female is 168 cms.
- The average weight of a male is 350 kgs while that of a female is 300 kgs.
- The daily milk yield ranges from 1.0 to 3.0 kg. o to three litres a day.
- The average production of the cows is 500–600 kg of milk in a lactation of 6–8 months.

There has been unrestricted interbreeding of the Kenkatha with other non-descript cattle and as a result, the breed has been diluted and its population is waning rapidly. Immediate steps are required to be taken to conserve and improve this indigenous breed of cattle.

To make a start, a breed society needs to be formed, which should be trained and supported for the immense task of safeguarding and upgrading of this breed to make it economically sustainable in the present scenario of the country.

## **Murrah :**

The Murrah buffalo is a breed of water buffalo (*Bubalus bubalis*) mainly kept for milk production. It originates in Haryana and Punjab of India, where it is kept in the districts of Bhiwani, Agra, Hisar, Rohtak, Jind, Jhajhar, Fatehabad, Gurgaon and the capital region of Delhi. It has been used to improve the milk production of dairy buffalo in other countries, such as Italy, Bulgaria and Egypt. A Murrah buffalo at the Lakshmi Dairy Farm in Punjab set a record of 26.335 kg (58.06 lb) of milk in the 2016 National Livestock Competition and Expo. In Brazil, this breed of buffalo is used for production of both meat and milk. Murrahs sell for a high price. Among Indian buffalo breeds, Murrah is noted to have the highest milk yield.

Murrah buffaloes are jet black in colour, sometimes with white markings on the face or legs. Their eyes are black, active, and prominent in females, but slightly shrunk in males and should not be walled, i.e., the cornea should not have whiteness. Their necks are long and thin in females and thick and massive in males. Their ears are short, thin, and alert.

They typically have short and tightly curved horns. Bulls weigh around 550 kg (1,210 lb) and cows around 450 kg (990 lb). Average milk production is 2,200 L (480 imp gal; 580 US gal) in a lactation period of 310 days.

Usually, the buffaloes of this breed are jet black in colour with occasional white marking on switch of tail. The buffaloes are reared in mixed type of housing with provision of shed during weather extremes. Animals are mostly stall fed with available seasonal green fodder. The milk yield of the breed ranges from 1003 to 2057 kilo grams per lactation with 6.9 to 8.3 % fat with an average of 1752 Kg per lactation and 7.3% fat.

## **Nagori**

Nagori is a cattle breed belonging to the Nagaur District of Rajasthan and the breeding tracts are in Bikaner, Jodhpur and Nagaur districts of Rajasthan.

It is a draught breed and is mainly used for agricultural purposes such as plowing, cultivation drawing water from wells and transportation of field produce to the markets. This breed is also famous as trotters. The animals are harnessed to light iron-wheeled carts for enabling quick transportation all over Rajputana.

The Nagori cattle bear resemblance to the Haryana and Kankrej breed of cattle. Due to the proximity of native tracts of the Haryana breed in the north and

northeast, and the Kankrej breed in the south and southwest, coupled with the frequency of famines in its native home, there has been extensive movements of the cattle to other regions in search of fodder, leading to frequent intermixture.

### **Characteristics:**

- The cattle are fine, big and erect, active yet docile and have white and gray color.
- They have long, deep and powerful frames, and are long-limbed with light bones.
- They have straight backs with well-developed quarters.
- The legs are straight with the hooves compact, strong and small.
- They are agile and have strong feet and great ease of movement.
- The face is long and narrow with a flat forehead which is not so prominent.
- The eyelids are heavy and overhanging and the eyes are small, clear and bright.
- The ears are large and pendulous. The neck is short, fine and looks powerful.
- The horns are moderate in size. They emerge from outer angles of the poll in an outward direction, with a gentle curve upwards and turning inwards at the points.

- The dewlap is small and fine. The skin is fine and slightly loose.
- The hump in the bulls is well-developed, not very firm and mostly hangs over.
- The shoulders and forearms look muscular and powerful.
- The tail is moderately long, ending in a tuft of black hair just below the hocks.
- The sheath is small, and the cows have well-developed udders with large teats.
- Average milk yield per lactation is 603 kg with an average milk fat of 5.8%. The lactation yield ranges from 479 to 905 kg.

## **NAGPURI :**

The breed has many synonyms such as "Berari", "Gaorani", Ellichpuri "Puranthadi", "Varhadi", "Gaolavi", "Arvi", "Gaolaogan", "Gangauri", "Shahi" and "Chanda". The breeding tract includes Akola, Amravati, Yavatmal, Wardha and Nagpur districts of Maharashtra. The breed is maintained for milk and draught purposes. The animals of this breed are very well-adapted to the harsh climate of Vidarbha region. These buffaloes are used for heavy draught purpose and Farmers prefer this breed due to its low maintenance cost, efficiency of feed conversion, moderate production and better adaptation to local climatic conditions. The breed is black with white patches on face, legs and tail tips.

However, “Puranthadi” strain is slightly brown in color. The horns are long, flat and curved, bending backward on each side of the neck nearly up to the shoulders with tips pointed mostly in upward direction. The animals are maintained in semi-intensive management system. Buffaloes and heifers in this area are reared mainly for fat production. Average milk yield per lactation is 1039 kg ranging from 760–1500 kg with average milk fat of 8.25% ranging from 7.0–8.8%.

## **Nili-Ravi**

Nili Ravi is also known as Panch Kalyani. The home tract of Nili Ravi buffaloes is the belt between the Sutluj and Ravi rivers of the undivided Punjab Province. Nili & Ravi were two different breeds long before, but due to the passage of time and with intensive crossbreeding, the two breeds converted into single breed named Nili Ravi. Nili Ravi buffaloes are found in almost all the districts, with major concentration in Amritsar, Gurdaspur and Ferozepur districts of Indian Punjab and in Lahore, Sheikhupura, Faizabad, Okara, Sahiwal, Multan, Bohawalpur and Bahwalnagar districts of Pakistan Punjab. The name Nili is supposed to have been derived from the blue water of river Sutluj. It is very easy to identify the animals of this breed. Animals have walled eyes and white markings on forehead, face, muzzle, legs and tail. The most desired character

of female is the possession of these white markings known as "Panch Kalyani". The animals are good milkers and comparable to Murrah in all aspects except the color. The average milk production of the buffalo is 1850 kilograms with 6.8 % fat. The lactation yield ranges from 1586 to 1929 Kg.

## **Nimari :**

Nimari, is a native Indian cattle breed found in the Nimari tract of Narmada valley, comprising the districts of Barwani, Khargon, Khandwa and parts of Harda in the State of Madhya Pradesh. The border of Kharone district towards Khandwa, Indore & Dewas also has a thin population of the Nimari cattle. Some of these animals are also found in the Jalgaon district of Maharashtra.

Nimari is a dual-purpose breed and is considered as the "Biological Engine of Nimari". It is an active breed, primarily used in draught work and agricultural operations. They are occasionally used for the purpose of transportation. The cows of this breed are known to be average milk yielders.

## **Characteristics:**

- They are red in colour with splashes of white on various parts of the body.
- In the Khamgaon strain the color is occasionally black or light red and white while in the Khamla

strain, it is red with a violet tinge and white or yellow and white.

- The animals are well-proportioned, compact, medium sized and muscular.
- The head is moderately long with a slight bulging forehead.
- They carry the head alertly, giving them a graceful appearance.
- They have a long body with a straight back and generally prominent hips
- The ribs are moderately arched and the quarters drooping to some extent.
- They possess hardiness and agility and are aggressive in temperament.
- The horns usually emerge in a backward direction from the outer angles of the poll, turning upward, outward and finally inward.
- At times, the horns are copper-coloured and pointed.
- The ears are moderately long and wide.
- The muzzle in many of the animals is either copper or amber in colour.
- The average body length is 127 cm in males and 113 cm in females.
- The average body height is 132 cm in males and 114 cm in females.
- The average body weight is 390 kgs in males and 339 kgs in females.
- The skin is fine and slightly loose.



- The tail is long and thin with the black switch reaching to the ground.
- The hooves are strong and can stand rough wear on stony ground.
- The hump in the bulls is well developed and sometimes hangs over.
- The dewlap and sheath are moderately developed, though the sheath has the tendency to be pendulous.
- The cows of this breed usually have well-developed udder.
- The average milk yield is 767 Kg per lactation and average milk fat is 4.9%.

With the launch of the Rashtriya Gokul Mission, the Union Government has focused its attention on the conservation and development of the '*Desi*' breeds which includes the **Nimari** breed of cattle. Also, noteworthy establishments are:

1. The National Programme for Bovine Breeding (NPBB) which focuses on Field Artificial Insemination (AI) Network with the objective of conservation of the indigenous breeds through establishment of breeders' associations and societies.
2. The National Programme for Dairy Development (NPDD) which focuses on development of infrastructure at grassroots by providing financial

and technical assistance for production, procurement, processing, and marketing by milk unions/federations.

## **Ongole :**

Ongole cattle as called as Ongolu Gitta are an indigenous cattle breed that originates from Prakasam District in the state of Andhra Pradesh in India. The breed derives its name from the place the breed originates from, Ongole. The Ongole breed of cattle, *Bos indicus*, is in great demand as it is said to possess resistance to both foot and mouth disease and mad cow disease. These cattle are commonly used in bull fights in Mexico and some parts of East Africa due to their strength and aggressiveness. They also participate in traditional bull fights in Andhra Pradesh and Tamil Nadu. Cattle breeders use the fighting ability of the bulls to choose the right stock for breeding in terms of purity and strength. The mascot of the 2002 National Games of India was Veera, an Ongole Bull

Ongole cattle are famous for their bulls. Traditionally, the Ongole breed have been raised by local farmers, fed by both the Gundlakamma, one of the rivers that originates from the Nallamala Hills, and in the plains, the Paleru river, a tributary of the Krishna River. The Ongole occupy an area no larger than about 100

square miles between the Gundlakamma and Musi rivers.

Ongole bulls have gone as far as America, the Netherlands, Malaysia, Brazil, Argentina, Colombia, Mexico, Paraguay, Indonesia, West Indies, Australia, Fiji, Mauritius, Indochina, and Philippines. The Brahmana bull in America is an off breed of the Ongole. The population of Ongole off-breed in Brazil is called Nelore and is said to number several million. The famous Santa Gertrudis breed developed in Texas; USA have Ongole blood. This makes Ongole breed the largest cattle breed by numbers, in the world surpassing even Wildebeest of Africa.

## **Characteristics**

Ongole cattle are known for their toughness, rapid growth rate, and natural tolerance to tropical heat and disease resistance. It was the first Indian breed of cattle to gain worldwide recognition.

**Ongole bull :** The Ongole is one of the heaviest breeds. They weigh approximately half a ton, are 1.7 meters in height and have a body length of 1.6 meters and girth measuring 2 meters.[4]

**Ongole cow :** The weight of an Ongole female is 432 to 455 kg. Milk yield is 600 kg to 2518 kg. The lactation period is 279 days.[6] Ongole milk has a butterfat

content of over five percent. This results in large, well-nourished calves with considerable growth by the time of weaning. Ongole cows stay close to their calves to protect them from predatory animals.

## **Pulikulam :**

Pulikulam is a popular draught and game breed of Tamil Nadu. It is named after its village of origin (Pulikulam in Tamil Nadu) and is also known as "Palingu maadu", "Mani maadu", "Jallikattu maadu", "Mattu maadu" and "Kilakattu maadu". Madurai, Sivaganda and Virudhunagar districts of Tamil Nadu form its breeding tract. Males are dark grey in colour while females are white or grey. The animals are small sized with compact body and short legs. Muzzle, eyelids, tail switch and hooves are black. Forehead is broad and has a groove at centre. Hump is large in males and small in females. Udder is not well developed. Horns are curved outward, upward, backward, and then inward, ending with pointed tips spaced wide apart. The breed is not meant for milk production and only a few animals are milked in a large herd for consumption by herdsman. Generally, milk yield is about 1.25 Kg per day within a range of 0.5 kg to 2 Kg. The animals are also reared for manure purpose.

## **Rathi :**

Rathi is an important dual purpose Indian cattle breed whose home tract lies in the heart of Thar desert. These animals are particularly concentrated in Loonkaransar Tehsil of Bikaner district, also known as the Rathi tract.

In addition, Rathi is also found in Ganganagar & Jaisalmer district of Rajasthan and in Fazilka & Abhror district of Punjab, adjoining Rajasthan. Farmers of this region, use this breed as a major source of livelihood.

The breed takes its name from a pastoral tribe called Rathis who are Muslims of Rajput extraction and lead a nomadic life. Rathi cattle originates from the mixture of Sahiwal, Red Sindhi, Tharparkar and Dhanni breeds apparently with a predominance of the Sahiwal blood.

### **Characteristics:-**

- These animals are of medium size with a symmetrical body and short and smooth body coat.
- Colour is generally brown with white patches all over the body though at times completely brown or animals with black coat and white

patches are also found. Lower body parts are generally lighter in colour as compared to the rest of body.

- Face is broad between the eyes and slightly dished while the ears are of medium size.
- Forehead is lean and of medium size.
- Horns range from short to medium, curving outwards, upwards, and inwards.
- Dewlap is fine, loose, and voluminous.
- It has large naval flap and loose skin with fine short hair.
- Tail is long, fine and tapering to a good black or white switch well below the hock.
- Udder and teat are well developed with a prominent milk vein.
- Average lactation milk yield is 1500 kg, ranging from 1050 kg to 2000 kg.
- Average age at first calving ranges from 45 – 57 months and inter calving period from 13 – 15 months.
- Females are docile and good milkers (1325 to 2093 kg per lactation).
- Age at Maturity is 36–48 months.
- Body Weight for Male is 350–400Kg and Female is 280–300 kg.

Nomads own and breed these animals, generally move with their herds from one place to another depending on availability of water and grazing pasture. Wheat straw, pala leaves and chaffed sewan grasses are fed to animals. At times, chaffed sorghum and pearl millets are also substituted for grasses and leaves. Dry stalks of sorghum and pearl millet are fed in the lean season. Lactating animals are provided with concentrate mixture in proportion to their production. Shelter is not provided for these animals except during extreme weather.

## **Red Sindhi :**

The Red Sindhi is an indigenous milch cattle breed with a reputation of being heat tolerant. It is the most popular of all [Zebu](#) dairy breeds. This breed originated in the mountainous region called 'Mahal Kohistan', spread over parts of Karachi, Thattha and Dadu districts in Sindh. Though the original breeding tract is in Pakistan (formerly India), some organised herds are available in Orissa, Tamil Nadu, Bihar, Kerala and Assam.

This breed has a high genetic potential for milk production and are largely maintained for this

purpose, across India, Pakistan, Bangladesh, and Sri Lanka.

These cattle are also hardy, with a high degree of resistance to heat and ticks. They adapt themselves well to stressful environments and are docile and quiet. The bullocks are steady workers, and are therefore, well suited for road and field work.

This breed is considered to have originated from Las Bela cattle found in the state of Bela, [Baluchistan](#). This breed is also known as “Malir”, “Red Karachi” and “Sindhi”.

The home-tract of this breed extends to the irrigated areas of Hyderabad (Sindh) and the arid plains of Lasbella district in Balochistan.

Due to its hardiness, its heat resistance and high milk yields, this breed has been promoted to many parts of India, and also to other parts of the world – including at least 33 countries in Asia, Africa, Oceania and the Americas.

### **Characteristics:**

- The Red Sindhi cattle have medium-sized, well-proportioned, and compact bodies.



- The body colour is mostly deep red, but also varies from a deep reddish brown to a yellowish red. Occasionally, small white patches are seen in the dewlap and forehead. In the males, the colour is darker on the shoulders and thighs.
- Their head is of a moderate size, well-proportioned with clear-cut outlines.
- The forehead is broad between the eyes and flat or slightly protruding, with a short crop of hair.
- The face is of medium length, gradually tapering into a square and they have an intelligent facial expression.
- They have a well-developed black muzzle with wide nostrils and muscular lips.
- The crest line is wide between the horns, and the poll is slightly protruding at the centre.
- They have thick, short, curved, horns that emerge laterally and end in blunt tips. These are thick and stumpy in males but thin in the females.
- The hind quarters are round and drooping, and the tail switch is black.
- The ears are of medium size, fine, clean-cut, and are carried at an angle. The skin inside is

generally coloured butter yellow, with a dark fringe along the edge.

- The hump is well-developed. The Red Sindhi cattle have medium-sized, well-proportioned, and compact bodies.
- The body colour is mostly deep red, but also varies from a deep reddish brown to a yellowish red. Occasionally, small white patches are seen in the dewlap and forehead. In the males, the colour is darker on the shoulders and thighs.
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- The crest line is wide between the horns, and the poll is slightly protruding at the centre.
- They have thick, short, curved, horns that emerge laterally and end in blunt tips. These are thick and stumpy in males but thin in the female.

- The females have capacious and pendulous udder with medium sized teats.
- The eyes are large, clear and well set apart, with eyebrows rather light.
- The neck is generally short and thick at the junction of the head and evenly joined at the shoulders.
- The navel flap is of moderate size, thin and clear-cut.
- The sheath is pendulous in males, but nominal in females.
- The dewlap is rather abundant both in males and females, but thin and hangs well in nice folds, with a soft mellow feel.
- The jaws are strong with the dewlap extending well underneath the lower jaw.
- Average height of a male is 130 cms and that of a female is 120 cms.
- Average body length of a male is 140 cms and that of a female is 140 cms.
- Average weight of a male is 450 kgs. and that of a female is 320 kgs.
- Average chest girth of a male is 180 cms and that of a female is 140 cms.
- The milk yield of the cattle ranges from 1100 to 2600 kg per lactation with an average yield of 1840 kg per lactation. However, yields as high

as 5,450 kg in a lactation period of 300 days have also been recorded.

- The average lactation length is 265 days.
- Fat percentage in the milk varies from 4 to 5.2% with an average of 4.5%.
- Age at first calving ranges from 30 to 50 months with an inter-calving period of 12 to 18 months.

The population of this cattle breed has shrunk to even less than 70,000 numbers, according to the year 2013 census. The prevalent situation calls for an urgent need for genetic management and conservation of this breed.

In view of the status and performance of this breed, all organized herds in our country should be declared as conservation units. Attempts should be made to multiply the germplasm of this breed at a faster pace.

An improvement programme incorporating all organized herds (Associated Herd Progeny Testing) should be planned on a priority, for improvement of this breed.

## **Sahiwal :**

Sahiwal is considered to be one of the best milch cattle breed of India. The breed derives its name from Sahiwal area in Montgomery district of Punjab in Pakistan. These animals are also known as "Lambi Bar", "Lola", "Montgomery", "Multani" and "Teli". The animals are very good for specialized dairy purpose. The breeding tract of the breed is Ferozpur and Amritsar districts of Punjab and Sri Ganganagar district of Rajasthan. Good herds of pure Sahiwal cattle are available around Fazilka and Abohar towns of Ferozepur district in Punjab. The cows are brownish red in colour; shades may vary from a mahogany red brown to more greyish red. Extremities in bulls are darker than rest of body colour. Occasionally there are white patches. Animals have well developed udder, good slope at rump and shorter horns. Dewlap is medium in size. Average lactation yield of Sahiwal cows is 2325 kilo grams. The lactation yield ranges from 1600 to 2750 Kg. However, selected herds may have higher productivity. Milk yield as high as 6000 lit has been recorded under organized farm conditions. Considering the merit of this breed, Sahiwal animals were imported by Australia and were used

in developing a synthetic crossbred called Australian Milking Zebu (AMZ) cattle.

A large herd of Sahiwal cows is maintained by National Dairy Research Institute, Karnal in Haryana. There are some Gaushalas maintaining Sahiwal animals in Punjab and Rajasthan.

## **Surti :**

Surti is also known as Charotari, Deccani, Gujarati, Nadiadi and Talabda. The breeding tract includes Vadodara, Bharuch, Kheda and Surat districts of Gujarat. The breed is named after its place of origin. Coat colour varies from rusty brown through silver-grey to black. Skin is black or brown in colour. Horns are flat, sickle shaped and are directed downward and backward, and then turn upward at the tip to form a hook. Average milk per lactation & average fat % are 1667 kg with 7.02% respectively. Majority of farmers maintain mixed herd of buffaloes and cows. Animal sheds are mostly part of human residence, but some farmers provide separate houses. About 50% of houses are open type and 50% are closed type. All houses have kutchha walls. The Surti buffalo is lighter in body weight, as compared to heavy breeds, consume less feed, thrives well both on stovers and on limited or no

green fodder, and produce milk with high fat and SNF content. It is popular with land less, small, and marginal farmers.

## **Tharparkar :**

Tharparkar (named after the Thar Desert in Rajasthan) is a dual purpose and disease resistant cattle breed. The breed is also known as “White Sindhi”, “Grey Sindhi” and “Thari” as per the place of its actual origin (Sind, Pakistan). The breeding tract of the breed includes Kutchchh district of Gujarat and Barmer, Jaisalmer and Jodhpur districts of Rajasthan. The breed is medium sized compact with white and light grey coloured coat. Face and extremities are darker than rest of the body. In bulls neck, hump, and fore and hind quarters are also dark. The colour gets darker during winter. The animals can thrive well on small bushy vegetation (Sewan grass) during drought and fodder scarcity condition and produce reasonable amount of milk with an average yield of 1749 kilo grams per lactation (ranging from 913 to 2147 Kg per lactation). Good animals with high nutrition have produced even higher than 3000 litre per lactation in farm condition. The males are also good for drought purpose. Due to better heat tolerance and disease resistance, this breed was used for

producing “Karan Fries” breed – a synthetic crossbred cattle breed at National Dairy Research institute (NDRI)

### **Umblachery :**

Umblachery cattle is native of Thanjavur, Thiruvarur and Nagapattinam districts of Tamil Nadu, India. This breed gets its name from the place of its origin – the Umblachery village in Nagapattinam district of Tamilnadu. It is variedly known as Jathi madu/ Mottai madu/ Molai madu/ Therkathi madu.

Umblachery is a draught breed of the zebu type, similar to Kangayam but smaller, and used for agricultural work. The males generally find use in ploughing, carting, thrashing and paddling. This breed is capable of doing continuous work for six to seven hours under the hot sun and is suitable for ploughing in marshy paddy fields because of its medium size.

The practice of dehorning of bullocks is peculiar in the Umblachery cattle. Dehorning of male calves is at about 10–12 months of age. During dehorning, there is a practice of pruning of ears. Umblachery breeds by natural mating and artificial insemination in few animals.



## **Characteristics:-**

- This is a medium-sized, docile cattle breed.
- The calves are generally red or brown at birth but change to grey during the growing period. The bullocks are dark grey with black extremities whereas the cows are grey with light dark grey colour in the face, neck and hip regions.
- They have white markings on face, limb and tail; markings on legs resemble socks.
- The forehead is slightly broad with a shallow groove in the middle and a white star.
- The ears are short and erect and horizontally placed.
- The eyelids and the muzzle are black in colour.
- The naval flap is inconspicuous and the penal sheath in males is well tucked up.
- The dewlap is short, thin and extends up to the sternum.
- The teats are small and set well apart.
- The udder is not well developed; it is bowl shaped and tucked up with the abdomen.

- The hump is fairly developed and medium in size in bullocks, well developed in bulls and small in cows.
- The hooves are strong, small, black in colour or partly or wholly white in colour.
- The horns are black in colour, medium in thickness, short and pointed.
- The tail is long and tapers gradually below the hock.
- The switch of the tail is white or partially white.
- Body weight of males vary between 268 – 297 kg and females weigh about 219 kg.
- Height at withers for males is 112.2cm to 116.8 cm and for females about 105 cm.
- Average heart girth for males is approx. 150 cm and for females approx. 135 cm.
- The age at first calving is approx. 52.4 months.
- The lactation period is about 245 days and the milk production per lactation is approx. 494 kgs and average milk fat is 4.94%.

## **Vechur :**

Vechur is one of the dwarf cattle breeds of India, with an average length of 124 cm and height of 87 cm, it is considered to be the smallest cattle breed in the world. It is known by the name of a place Vechur – a small place by the side of Vembanad lake near Vaikam in Kottayam district of South Kerala. The breeding tract includes Alapuzha/ Alleppey, Kottayam, Pathanamthitta and Kasargode districts of Kerala. The animals are light red, black or fawn and white in colour. In bulls, colour in between fore and hindquarters is relatively dark or dark grey. Horns are small, thin curving forward and downward. In some cases, they are extremely small and are hardly visible. The animals are well adapted to the hot and humid climate of the area. The animals are maintained for manure and milk. Milk production is relatively higher than any other dwarf cattle. Average milk yield is 561 Kg per lactation and the milk fat percent ranges from 4.7 to 5.8.



