

# IMPORTANT BREEDS OF CATTLE AND BUFFALOES (LPM-601)



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# Population of Cattle (20<sup>th</sup> Livestock Census)

- Total Livestock population- 535.78 million (increase of 4.6% over Livestock Census 2012).
- Total number of cattle -192.49 million in 2019 (increase of 0.8 % over previous Census).
- Exotic/Crossbred and Indigenous/Non-descript Cattle population - 50.42 million and 142.11 million; respectively.
- Decline of 6 % in the total Indigenous (both descript and non-descript) Cattle.

## Classification of breeds of cattle on the basis of type of horns (Payne, 1970):

- **Short-horned zebu:** Bachaur, Hariana, Krishna Valley, Gaolao, Nagori, Mewati, Ongole and Rathi.
- **Lateral-horned zebu:** Gir, Red Sindhi, Sahiwal, Dangi, Deoni, Nimari
- **Lyre-horned zebu:** Kankrej, Malvi, Tharparkar
- **Long-horned zebu:** Amritmahal, Hallikar, Kangayam and Khillari
- **Small short-horned/lyre-horned zebu:** Ponwar, Punganoor, Shahabadi, Kumauni

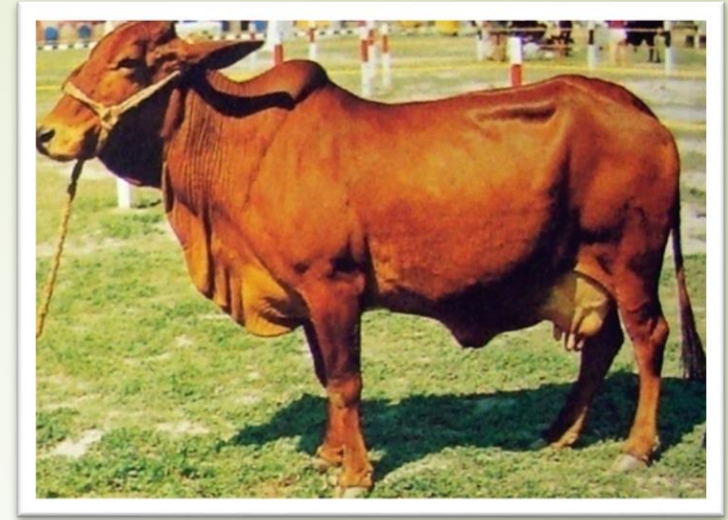
## Classification of breeds of Cattle on the basis of their utility:

Milch Breeds	Dual purpose Breeds	Draft Breeds
1. Sahiwal	1. Hariana	1. Hallikar
2. Red Sindhi	2. Ongole	2. Amritmahal
3. Gir	3. Kankrej	3. Kangayam
4. Tharparkar	4. Deoni	4. Khillari
	5. Dangi	5. Bargur
	6. Nimari	6. Nagori
	7. Rathi	7. Bachaur
	8. Mewati	8. Malvi
		9. Kenkatha
		10. Kherigarh
		11. Ponwar
		12. Siri
		13. Krishna Valley
		14. Gaolao



# **MILCH BREEDS OF CATTLE**

# Sahiwal



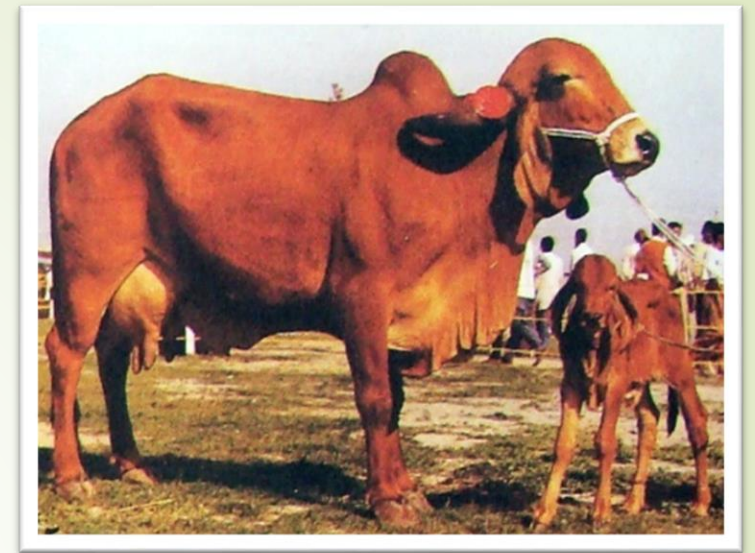
- Original breeding tract in Montgomery district (Pakistan), Ferozepur and Amritsar districts in Punjab.
- Heavy breed, heavy body confirmation, typical coat colour is red/brown, head is medium sized, horns are short and stumpy.
- Dewlap is large and pendulous, hump in males is massive and droops on one side, tail is long almost touching the ground, navel flap is loose and hanging, udder is well developed.
- The average milk yield of this breed is between 1700 and 2700 kgs in lactation period of 300 days.

## Red Sindhi



- Original breeding tract in Karachi (Pakistan).
- Typical colour is deep dark red varying from dun yellow in almost dark brown.
- Horns are thick and short which emerge laterally, muzzle is black, well developed hump specially large in males, dewlap is large and pendulous, navel flap is prominent.
- Milk yield ranges from 1250 to 1800 kg per lactation.

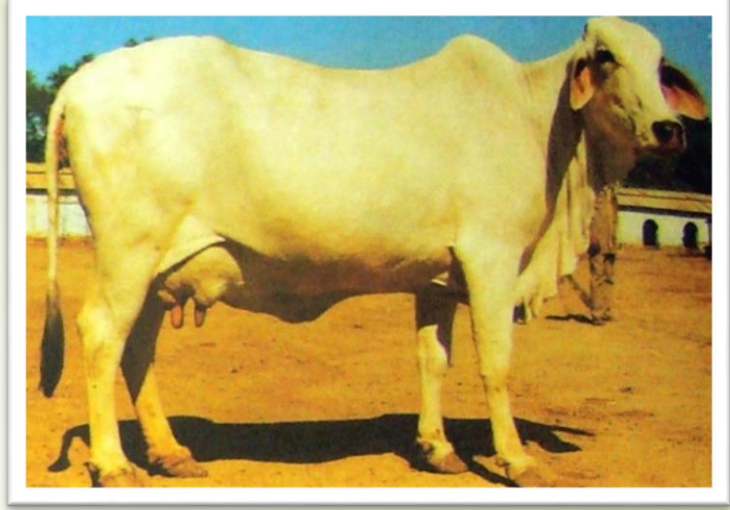
## Gir




- Originated in Gir forests of South Kathiawar in Gujarat also found in Maharashtra and adjacent Rajasthan.
- Typically having a rounded and domed forehead, long pendulous ears and horns which sweep back and spiral up, mottled with the colour ranging from red to white.
- Horns are peculiarly curved, giving a ‘half moon’ appearance, large body size with loose body confirmations, skin is loose and pliable.
- Milk yield ranges from 1200-1800 kg per lactation.
- Exported to Western countries to develop beef breeds.



## Tharparkar



- Home tract: Tharparkar district (Pakistan) and also found along western Rajasthan (Jodhpur, Barmer and Jaisalmer).
- Strongly built, medium-sized, with straight limbs and good feet, alert and springy carriage, colour is white or grey.
- Head is of medium size, the forehead broad and flat or slightly convex, in males hump is moderately well developed.
- Cows are good milch animals (1,800 – 2600 kg).
- Age at first calving ranges from 38-42 months and inter calving period from 430 to 460 days.



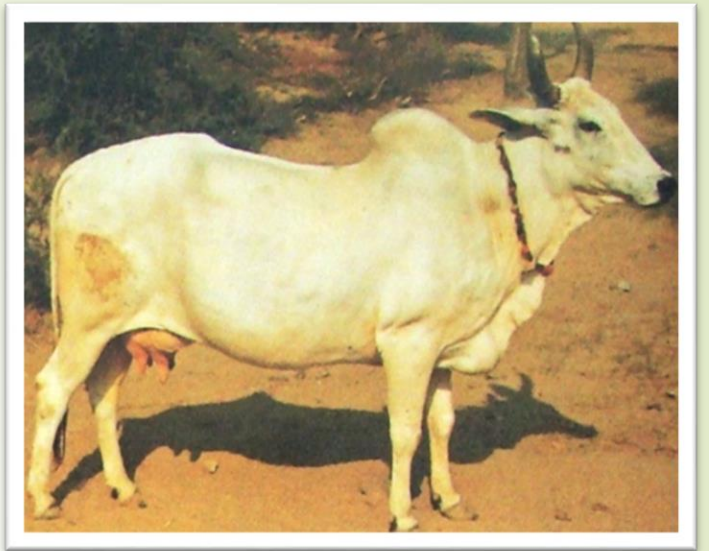
# **DUAL PURPOSE BREEDS OF CATTLE**

## Deoni



- Originated in Western Andhra Pradesh and also found in Marathwada region of Maharashtra state and adjoining part of Karnataka.
- Medium-sized animals, body colour is usually spotted black and white, face is also similarly patchy and spotted with black and white.
- Milk yield ranges from 636 to 1230 kg per lactation.
- Caving interval average is 447 days. Bullocks are suitable for heavy cultivation.

## Haryana



- Originated from Rohtak, Hisar, Jind and Gurgaon districts of Haryana and also popular in Punjab, UP and parts of MP.
- Medium sized with well proportionate body, typical colour is white/light grey, bulls get darker in colour with increase in age, medium sized head carried high
- Premier dual purpose breed of India. Bullocks are known for excellent draft capabilities in Indo- gangetic plains.
- Used for grading up of non-descript cattle. Haryana cows are fair milkers yielding 600 to 800 kg of milk per lactation.

## Ongole



- The native tract of this breed is the Guntur district of Andhra Pradesh.
- This is essentially a large muscular breed suitable for heavy draft work.
- An average yield of 1,000 kg is common. Good specimens have given up to 1,500 kg of milk per lactation.
- Ongole breeds are known as Nellore breed in Brazil.

## Gaolao



- This breed closely resembles Ongole breed.
- These breeds are found in Maharashtra and Madhya Pradesh.
- The animals are basically draft animals.
- Milk yield in cows is moderate, good specimens yielding up to 1,000 kg per lactation.

## Rathi



- This is also known as Rath. Rathi breeds are mostly located in Alwar district of Rajasthan.
- They are also found in and around Bikaner district.
- They are medium-sized dual- purpose animals, good cows yielding up to 1,200 kg of milk per lactation.
- The bullocks are adopted moderately for heavy ploughing and road work.

## Krishna Valley



- The home tract of this breed is the black cotton soil along the River Krishna and the adjoining areas of Ghatprabha and Malaprabha in Karnataka.
- They are also found in certain parts of Andhra Pradesh.
- The bullocks are massive and powerful, and good for draft in heavy soils.
- Cows are fairly good milkers.



## Kankrej



- The home tract of this breed is southeast of Rann of Kutch in Gujarat—from the southwest corner of Tharparkar district (Pakistan) to Ahmedabad and from Dessa in the east to Radhanpur in the west.
- They are fast and powerful draft cattle (Sawai-chaal).
- Cows are average milkers, yielding about 1,400 kg per lactation in towns and less in villages.



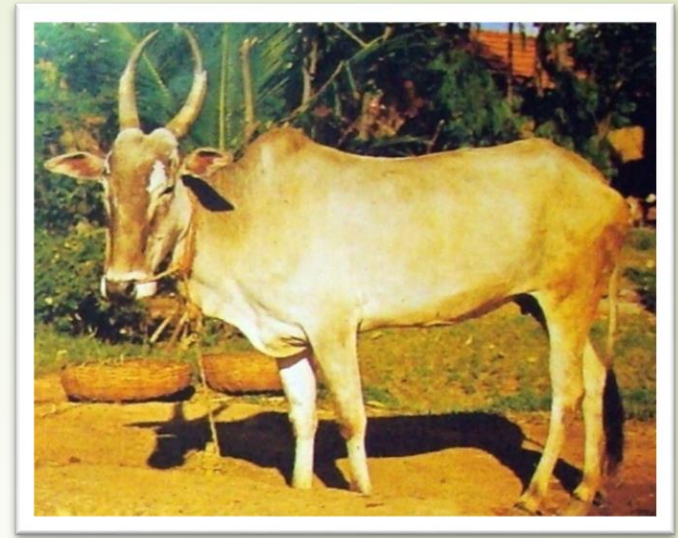
# **DRAFT BREEDS OF CATTLE**

# Kangyam



- Originated in Kangayam, Dharapuram, Perundurai, Erode, Bhavani
- Medium sized, strong and active, with compact body, colour is grey or white in cows, bulls are grey with dark coloured hump, face, fore & hind quarters & legs, head is prominent with broad forehead with groove at centre, horns are spread apart, nearly straight with a slight curve backwards.
- Bullocks are known for superior draft power.
- Can thrive on poor quality forages. Bulls mature late (6 years), with less working age up to 11 years.

## Hallikar



- Mysore, Mandya, Bangalore districts of Karnataka.
- Typical colour is dark grey, with deep shading in fore & hind quarters
- Horns emerge in proximity to each other near the top of the poll, carried backward & then comes forward
- Premier draft breed of India. Known for trotting ability & ploughing on hard soil.
- Bulls have great strength & endurance power.
- Long calving interval (600 days).

## Amritmahal



- Originated in Hassan, Chikmagalur and Chitradurga district of Karnataka.
- Head is long and tapers towards muzzle, forehead bulges out, narrow & furrowed in middle.
- Horns emerge from the top of the poll, fairly close together in an upward and backward direction, and terminate in sharp points with black coloration.
- Fast & excellent for quick transportation.

## Bachaur



- This breed is found in Sitamarhi district of Bihar.
- It has very close similarity to the Haryana breed.
- The males are well known for their draft capacity and their ability to thrive under poor conditions of feeding.
- The females of this breed are not good milkers.



# **EXOTIC BREEDS OF CATTLE**

# 1. Holstein Friesian



- Origin: Originated from the Northern parts of Netherlands, especially in the province of Friesland.
- Largest dairy and highest milk producer breed.
- Morphological features: Ruggedly built, Head is long, narrow and straight with slightly rounded withers.
- Large capacious udder, colour is typical markings of black and white all over the body
- Milk yield 5000-9000 kg, Av.: 25 liter of milk per day, whereas a cross breed H.F. cow gives 10-15 liter per day.



## 2. Jersey



- Origin: Originated from Jersey Island, U.K.
- Smallest of the dairy types of cattle.
- Morphological features: Compact and angular body, the colour in Jerseys may vary from a very light grey or mouse colour to a very dark fawn or a shade that is almost black.
- Commonly darker about the hips and about the head and shoulders than on the body.
- Age at first calving : 26-30 months, Inter-calving 13-14 months, Milk yield 5000-8000 kg, Cross bred Jersey cow gives 8-10 litres per day.

### 3. Brown Swiss



- Origin: The mountainous region of Switzerland.
- Breeds are rugged in nature and good milk production.
- Average milk yield is 5000 kg per lactation.
- The Karan Swiss is the excellent crossbred cattle obtained by crossing this breed with Sahiwal cattle at NDRI, Karnal.

## 4. Red Dane



- Originated in Denmark.
- Body colour is red, reddish brown or even dark brown.
- A heavy breed.
- The lactation yield varies from 3000 to 4000 kg.

## 5. Ayrshire



- Origin: Scotland
- Considered as most beautiful dairy breed.
- These are very active animals but hard to manage.
- They do not produce as much milk or butter fat (only 4%) as some of the other dairy breeds.
- The breed was also known as Dunlop cattle or Cunningham cattle

## 6. Guernsey



- Originated from Small Island of Guernsey in France.
- Cherry red to brown in colour. Mahogany and white is a variation in colour.
- The milk has a golden colour due to an exceptionally high content of beta-carotene.
- Produce around 6000 kg milk per lactation.
- Notable advantages: High efficiency of milk production, low incidence of calving difficulty and longevity.



# **INDIAN BREEDS OF BUFFALOES**

# Classification of Indian riverine buffaloes on the basis of regions

Group	Breeds
1. Murrah Group	Murrah, Nili-Ravi
2. Gujarat Group	Surti, Jaffarabadi, Mehsana
3. Uttar Pradesh Group	Bhadawari, Tarai
4. Central India Group	Nagpuri, Pandharpuri, Kalahandi, Sambalpuri
5. South India Group	Toda, South Kanara

# 1. Murrah



- Home tract: Rohtak, Hisar and Jind of Haryana, Nabha and Patiala districts of Punjab and southern parts of Delhi.
- The colour is usually jet black.
- Tightly curved horn is an important character of this breed.
- Most efficient milk and butter fat producers in India.
- Butter fat content is 7.83%. Average lactation yield is varying from 1500 to 2500 kg per lactation.



## 2. Nili-Ravi



- Originated around the river Ravi, Sutlej valley in Ferozepur district of Punjab and in the Sahiwal district of Pakistan.
- The peculiarity of the breed is the wall eyes. Black colour with white markings on tail and face and extremities.
- Head is small, elongated, bulging at top and depressed between eyes.
- Horns are very small and tightly coiled.
- The milk yield is 1500-1850 kg per lactation.

### 3. Bhadawari



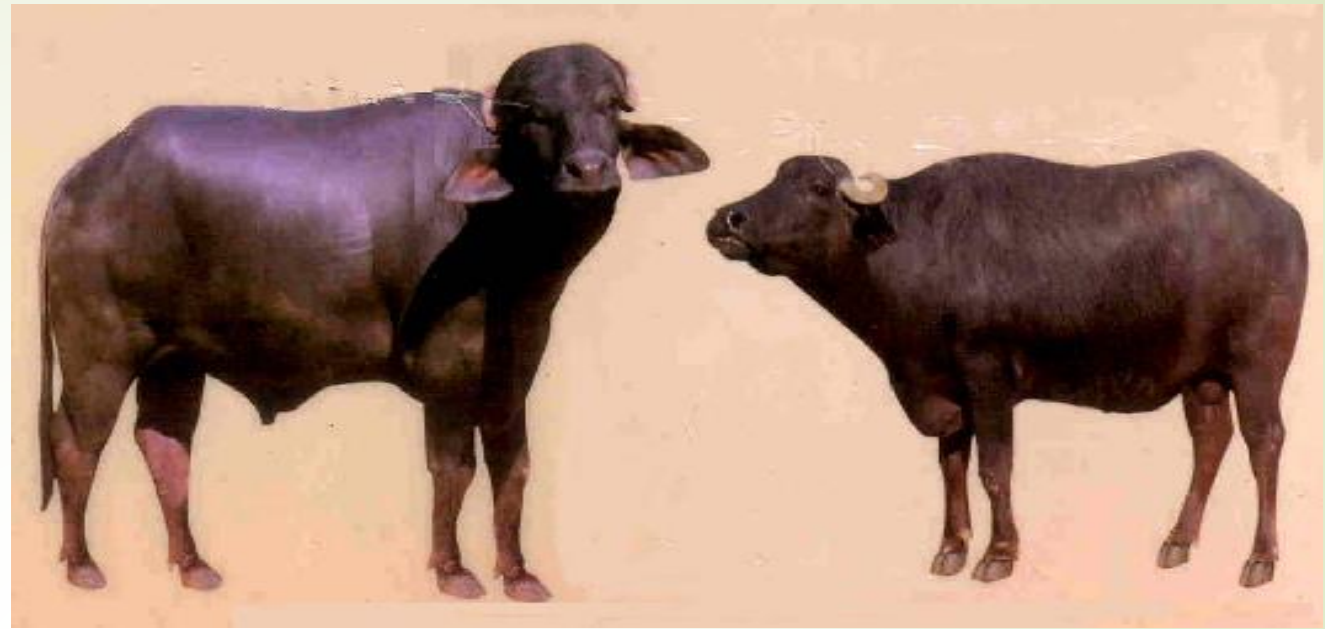
- Home tract: Agra & Etawah districts of UP and Gwalior district of MP.
- Medium sized and high heat tolerance.
- Light/copper coloured body. Eye lids: Copper or light brown colour.
- Two white lines (Chevron) are present at the lower side of the neck.
- The average milk yield is 800 to 1000 kg per lactation with 6.0-12.50% fat.
- This breed is an efficient converter of coarse feed into butter fat and is known for its highest butter fat content.

## 4. Surti



- Home tract: Kaira and Baroda district of Gujarat.
- Coat colour varies from rusty brown to silver-grey.
- The horns are sickle shaped, moderately long and flat.
- The peculiarity of the breed is two white collars, one round the jaw and the other at the brisket region as Bhadawari.
- The milk yield ranges from 1000 to 1300 kg per lactation.
- The peculiarity of this breed is very high fat percentage in milk (8-12 per cent).

## 5. Mehsana



- Home tract: Mehsana, Sabarkantha and Banaskantha districts in Gujarat and adjoining Maharashtra state.
- The breed is evolved out of crossbreeding between the Surti and the Murrah.
- Body is longer than Murrah but limbs are lighter.
- The horns are less curved than in Murrah and are irregular.
- The milk yield is 1200-1500 kg per lactation.

## 6. Jaffarabadi



- Home tract: Gir forests, Kutch and Jamnagar districts of Gujarat.
- The heaviest Indian breed of buffalo.
- The horns are heavy, inclined to droop at each side of the neck and then turning up at point (drooping horns).
- The udder is well developed with funnel shaped teats.
- The average milk yield is 1000 to 1200 kg per lactation.
- These animals are mostly maintained by traditional nomadic breeders called Maldharis.

## 7. Nagpuri



- This breed is also called as Elitchpuri or Barari.
- Home tract: Nagpur, Akola and Amrawati districts of Maharashtra.
- Black coloured animal with white patches on face, legs and tail.
- The horns are long, flat and curved, bending backward on each side of the back. (Sword shaped horns).
- The milk yield ranges from 700 to 1200 kg per lactation.

## 8. Toda



- Named after an ancient tribe, Toda of Nilgiris Hills of south India and it is a semi-wild breed.
- The predominate coat colours are fawn and ash-grey.
- Thick hair coat is found all over the body.
- They are gregarious in nature. The body is long and deep and the chest is deep. The legs are short and strong.
- The horns are set wide apart curving inward, outward and forward forming a characteristic crescent shape.
- The average milk yield is 500 kg per lactation with fat content of 8%.



**THANKS**