

IMPORTANT BREEDS OF CATTLE

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Population of Cattle (20th 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.

What is Breed ?

- A breed is a specific group of domestic animals having homogeneous appearance (phenotype), homogeneous behaviour, and/or other characteristics that distinguish it from other organisms of the same species.

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

Short-horned zebu: Bachaur, Haryana, 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:

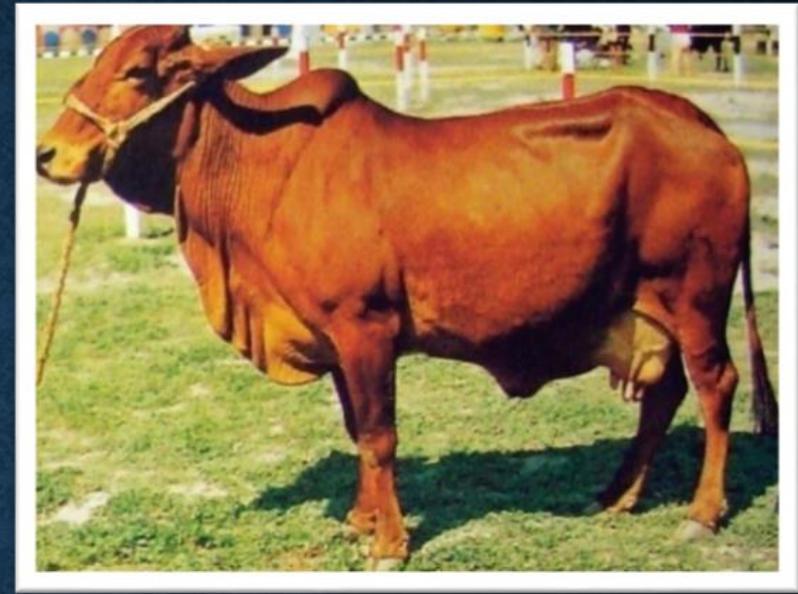
Milch Breeds	Dual Purpose Breeds	Draft Breeds
1. Sahiwal	1. Badri	1. Amritmahal
2. Red Sindhi	2. Belahi	2. Bachaur
3. Gir	3. Binjharpuri	3. Bargur
4. Rathi	4. Deoni	4. Dagri
	5. Gangatiri	5. Dangi
	6. Gaolao	6. Ghumusari
	7. Haryana	7. Hallikar
	8. Himachali Pahari	8. Kangayam
	9. Kankrej	9. Kenkatha
	10. Lakhimi	10. Khariar
	11. Nari	11. Kherigarh
	12. Ongole	12. Khillar
	13. Poda Thirupu	13. Kokan Kapila
	14. Punganur	14. Kosali

Milch Breeds	Dual Purpose Breeds	Draft Breeds
	15. Purnea	15. Krishna Valley
	16. Tharparkar	16. Ladakhi
		17. Malnad Gidda
		18. Malvi
		19. Mewati
		20. Motu
		21. Nagori
		22. Nimari
		23. Ponwar
		24. Pulikulam
		25. Red Kandhari
		26. Siri
		27. Umblachery
		28. Vechur

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:

- Red Sindhi is a reputed heat tolerant milch cattle breed originating from Sindh province of Pakistan.
- The breed is also known as “Malir”, “Red Karachi” and “Sindhi”.
- The breed is of distinct red colour and darker than Sahiwal. Red shades vary from dark red to dim yellow but most commonly, the animals are dark red.
- Horns are thick at the base and emerge laterally and curve upward.
- Muzzle is black, well developed hump specially large in males, dewlap is large and pendulous, navel flap is prominent.
- The milk yield of the cattle ranges from 1100 to 2600 kg per lactation with an average yield of 1840 kg per lactation.
- Fat percentage in the milk varies from 4 to 5.2% with an average of 4.5%.



Gir:

- The breed is also known as “Bhodali”, “Desan”, “Gujarati”, “Kathiawari”, “Sorthi”, and “Surati”.
- The breeding tract of the breed includes Amreli, Bhavnagar, Junagadh and Rajkot districts of Gujarat and is named after the Gir forest, the geographical area of origin of the breed.
- This is a world-renowned breed known for its tolerance to stress conditions.
- The animals are of red colour. Many animals have white spots. Variants with different shades of red are also available.
- The animals have typically dome shaped forehead and long ears, Horns are peculiarly curved, giving a ‘half moon’ appearance.
- Reported Average Milk production is 2110 lit. per lactation.
- Exported to Western countries to develop beef breeds.



Rathi:

- Rathi is an important milch breed of cattle found in the arid regions of Rajasthan.
- It takes its name from a pastoral tribe called Raths.
- Rathi animals are particularly concentrated in Loonkaransar tehsil of Bikaner district, which is also known as Rathi tract.
- The Breeding tract of this breed lies in the heart of Thar Desert consisting of Bikaner, Ganganagar and Jaisalmer districts of Rajasthan.
- The animals are usually brown with white patches all over the body, but animals having completely brown or black coat with white patches are also seen.
- The cows on an average produce 1560 kilo grams of milk. The lactation milk yield ranges from 1062 to 2810 Kg.

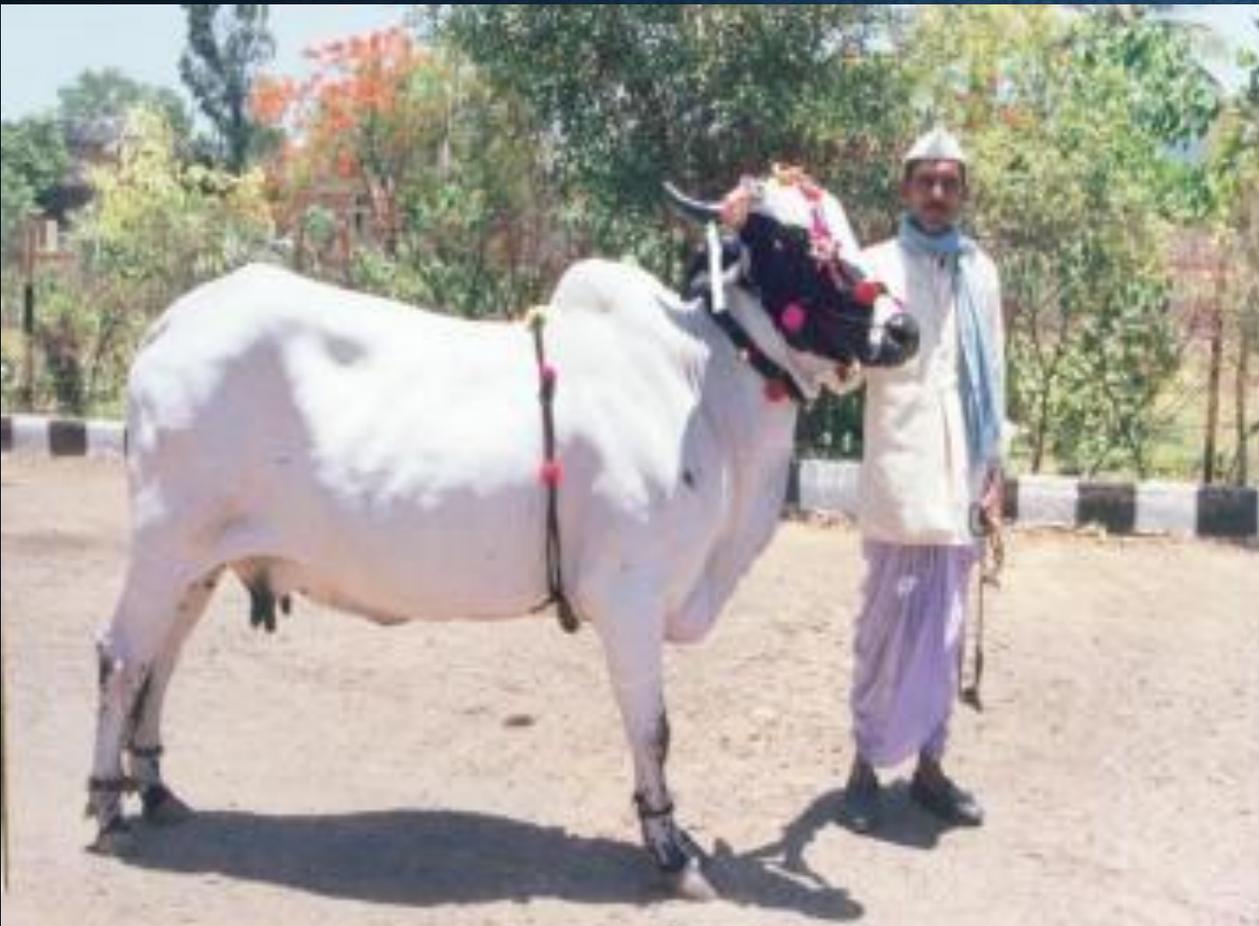


DUAL PURPOSE BREEDS OF CATTLE

Deoni:

- 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 of the breed includes Bidar district of Karnataka and Parbhani, Nanded, Osmanabad and Latur districts of Maharashtra.
- 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.
- The breed produces scanty milk with average yield of 868 kg per lactation (ranging between 638 to 1229 kg per lactation). The fat percentage in the milk is 4.3 % on an average.



Gangatiri:

- Gangatiri is also known as Eastern Haryana or Shahabadi.
- The breeding tract includes Bhojpur district of Bihar and Varanasi, Mirzapur, Ghazipur and Ballia districts of Uttar Pradesh.
- The animals of this breed are medium milk producers and possess good draftability also.
- The colour is complete white or Grey.
- The horns are medium sized and emerge from side of the poll behind and above eyes in outward and curving upwards and inwards ending with pointed tips.
- The forehead is prominent, straight and broad with shallow groove in the middle.
- Eyelids, muzzle, hooves and tail switch are generally black in colour.
- The average milk yield in a lactation is around 1050 Kg, varying from 900 to 1200 Kg with an average fat of 4.9 %, varying from 4.1 to 5.2 %.



Gaolao:

- Gaolao is a breed of western and middle part of India and known for its agility.
- The breed is also known as “Arvi” and “Gaulgani”.
- The breeding tract of the breed includes Balaghat, Chhindwara, Seoni districts of Madhya Pradesh; Durg and Rajnandgaon districts of Chattisgarh and Wardha and Nagpur districts of Maharashtra.
- The breed is suitable for transportation in hilly areas.
- The coat colour is blackish white in males and white in females.
- Males are generally grey over the neck. Horns are short, stumpy and curved slightly backward. Head is markedly long and taper towards muzzle. Forehead recedes at the top giving a slightly convex appearance.
- The milk yield is low with an average of 604 kg per lactation with 4.32% fat (ranges between 470 to 725 kg per lactation).



Haryana:

- Haryana is one of the most prominent dual purpose cattle breed of Indo Gangetic plain and named according to the breeding tract of the breed (Haryana state).
- The breeding tract of the breed includes Hisar, Rohtak, Sonapat, Gurgaon, Jind and Jhajjar districts of Haryana.
- Typically, the breed is white or light grey coloured with coffin shaped skull.
- In bulls colour in between fore and hind quarters is relatively dark or dark grey.
- The animals have long and narrow face, well-marked bony prominence at the centre of poll and small horns.
- The breed is mainly maintained for bullock production as they are powerful work animals and therefore more attention is paid in managing male calves.
- Good cows can produce even up to 1700 kilo grams of milk in a lactation with average cows producing around 997 Kg in a lactation (ranging between 693 to 1745 Kg).



Kankrej:

- It takes its name from the name of geographical area i.e. Kankrej taluka of Banaskantha district in Gujarat.
- They are found in the area southeast of Rann of Kutch comprising Mehsana, Kutchchh, Ahmedabad, Kheda, Anand, Sabarakantha and Banaskantha districts of Gujarat and Barmer and Jodhpur districts of Rajasthan.
- Coat colour of the animal varies from silver grey to iron grey and steel black.
- In males, forequarters, hindquarters, and hump are slightly darker than the rest of the body.
- Bulls tend to get darker than cows and bullocks.
- The hump in the males is well developed and not as firm as in other breeds. Forehead is broad and slightly dished in the centre.
- Face is short and nose slightly upturned.

- Unique characteristic of this breed is its large, pendulous ears. The horns are lyre shaped.
- The cows are good milkers and bullocks are used for agricultural operations and road transport.
- The cows yield on an average 1738 kilo grams and a maximum of 1800 Kg of milk in a lactation.



Ongole:

- Ongole is a prominent dual purpose breed of Andhra Pradesh. The breed got its name from its geographical area of origin, *i.e.* Ongole. The breed is also known as “Nellore”.
- The breeding tract of the breed includes East Godavari, Guntur, Ongole, Nellore and Kurnool districts of Andhra Pradesh and extends all along the coast from Nellore to Vizianagram.
- The breed is known for hardiness, disease resistance and capacity to thrive on scanty resources.
- The breed has glossy white coat colour. Males possess dark markings on head, neck and hump and black points on knees and pastern.
- Horns are short and stumpy, growing outward and backward from the outer angles of the poll, thick at the base and firm without cracks.
- In cows, horns are thinner than bulls. Horns in cows generally extend outward, upward and inward.
- Breed can be identified visibly by its majestic gait, stumpy horns and large fan shaped and fleshy dewlap.

- The breed produces moderate milk with an average of 798 kg per lactation and with an average fat percentage of 3.79%.



Purnea:

- Purnea is small sized breed of cattle and named after its breeding tract.
- The breeding tract includes Madhepura, Purnia, Katihar, Araria, Kishanganj and Supaul districts of Bihar.
- This breed of cattle is mainly used for milk, draught and manure and also have very good drought and heat tolerant capabilities.
- Colour of the animals are primarily grey followed by red and black.
- These are small sized animals and have medium hump, small to medium dewlap, small naval flap and small to medium sized udder. Head is medium in size.
- Horns are straight and mostly carried upwards sometimes laterally.
- The average lactation yield of the cow is 609 kg (ranges from 452 to 785 kg) with an average milk fat is 4.22 % (ranges from 4 to 4.5 %).



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.
- Produce reasonable amount of milk with an average yield of 1749 kilo grams per lactation (ranging from 913 to 2147 Kg per lactation).



DRAFT BREEDS OF CATTLE

Amritmahal:

- Amritmahal is also known as “Doddadana”, “Jawari Dana” and “Number Dana”.
- “Amrit” means milk and “Mahal” means house.
- The breeding tract includes Chikmagalur, Chitradurga, Hassan, Shimoga, Tumkur and Davanagere districts of Karnataka.
- Amritmahal was developed from a herd established by the ruler of Mysore state between 1572 and 1636 A D and was developed from draught breed of southern India with an objective to increase the milk productivity.
- The breed is usually Grey in colour but the colour varies from white to almost black. White grey markings are present on face and dewlap in some animals. Dark shades on neck, shoulder, hump and hindquarters.
- Head is long and tapers towards muzzle. Horns are long and emerge from the top of the poll, fairly close together in backward and upward direction, turn in and end in sharp black points - sometime touching each other.

- This is a famous draught breed known for its power and endurance and animals are fiery and active. Bullocks are especially suited for trotting and quick transportation. Cows are very poor milkers. Average milk yield per lactation is 572 kg.



Bachaur:

- The breeding tract of Bachaur cattle is Sitamarhi, Dharbanga and Madhubani district of Bihar.
 - The breed has very close similarity to the Haryana breed.
 - The breed is primarily utilized for draft qualities and ability to thrive with lower quality feeds.
 - Common colours of Bachaur cattle is grey or greyish white.
 - They are compact with straight backs, well-rounded barrels, short necks and muscular shoulders.
 - The forehead is broad and flat or slightly convex. The eyes are large and prominent.
 - The horns are medium-sized and stumpy, curving outward, upward and downward.
 - Average milk yield per lactation of Bachaur cow is 347 kg with an average milk fat of 5 %.
- The lactation milk yield ranges from 225 to 630 kg.



Hallikar:

- Also known as “Mysore”, the breed is considered as best draught breed of Southern India. The breeding tract comprises Mysore, Mandya, Bangalore, Kolar, Tumkur, Hassan and Chitradurga districts of Karnataka. It is white to light grey in colour.
- Horns emerge near each other from top of poll and are carried straight, upward and backward.
- White markings or irregular patches around the eyes, cheeks, neck or shoulder region are also found.
- Average milk yield per lactation is 542 kg ranging from 227-1134 kg with average milk fat of 5.7%.



Kangayam:

- The breeding tract of this breed is Coimbatore, Erode, Dindigul, Karur and Namakkal district of Tamil Nadu. This breed derives its name from its habitat - Kangayam taluk of Erode district.
- The breed is usually gray or white in color. Coat is red at birth, but changes to grey at about 6 month of age.
- The males are generally gray in color with black or very dark gray markings on the head, neck, hump and quarters.
- Cows are generally white and gray with deep markings on the knees, and just above the fetlocks on all four legs.
- The most prominent feature of this breed is that they have dark eyes with prominent black rings around them.
- Horn are long and strong, take backward, outward and upward sweep and then curving inward with tips tending to meet each other to form crescent shape.

- Kangayam cattle are of moderate size, active and powerful, and are highly prized draught animals.
- Average lactation milk yield of Kangayam cattle is 540 kg with an average milk fat of 3.9%.



Krishna Valley:

- Krishna Valley breed is a draught breed used extensively in the black cotton soil in the watershed of Krishna River.
- The breeding tract of the breed includes Belgaum, Raichur and Bijapur districts of Karnataka and Satara, Sangli and Solapur districts of Maharashtra.
- The common colour is grey - white with a darker shade on fore & hindquarters in males.
- Adult females are more whitish in appearance. Brown & white, black & white, and mottled colours are often seen.
- Its massive body and distinct bulging forehead can easily identify this breed.
- Horns are small in size and curved and usually emerge in an outward direction from the outer angles of the poll curving slightly upward and inward.



Umblachery:

- A noted draught cattle breed of Tamil Nadu, Umblachery is famous for its sturdiness and strength.
- The breeding tract includes Nagapatinam and Thiruvarur districts of Tamil Nadu.
- Typically, animals are red at birth and thereafter change to grey during development.
- Males are dark grey with black extremities whereas cows are grey with light dark grey area in face, neck and hip regions.
- There are white markings on face, limb and tail and the marking on the leg resembles socks.
- This breed is suitable for ploughing, carting, threshing and levelling in marshy paddy fields because of its medium size.
- Most of the cows are not milked and calves are allowed to suckle the dam. Average recorded milk yield is 494 Kg per lactation with average milk fat of 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.
- 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.
- Average milk yield is 561 Kg per lactation and the milk fat percent ranges from 4.7 to 5.8.



Vechur Bull

EXOTIC BREEDS OF CATTLE

Holstein Friesian:

- Originated from the Northern parts of Netherlands, especially in the province of Friesland.
- Largest dairy and highest milk producer breed.
- 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.



Jersey:

- Originated from Jersey Island, U.K.
- Smallest of the dairy types of cattle.
- 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.



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.



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.



Ayrshire

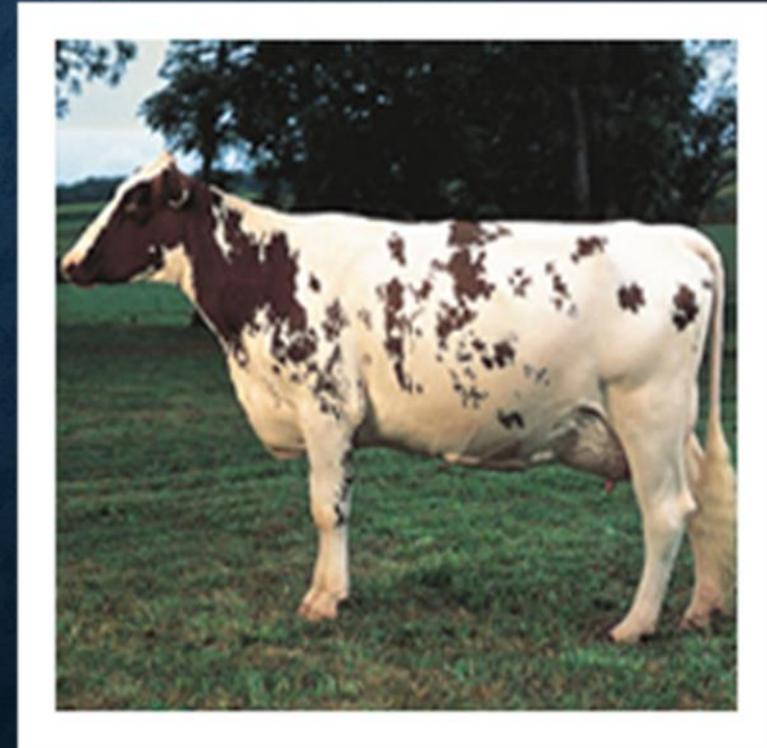
Origin: Scotland

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



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.



- Crossbreeding work started in India as early as 1875, near Patna using Shorthorn bull on local cows and the “Taylor” breed of cattle was formed (Sinha, 1951).
- The average milk yield of 5-6 liters/day.
- These animals are black, grey or red in colour.



Karan Swiss:

- Origin: NDRI Karnal, Haryana, Cross between Sahiwal cow and Brown Swiss Bull.
- Colour: Light grey to deep brown
- Head and Neck: Forehead is slightly dished, neck is medium
- Horns: Horns are sharp.
- Ears: Small
- Hump: absent
- Naval flap: Slightly loose
- Body: Body is large, Legs are proportionate in size and well set apart
- Milk Yield: 3500kg/lactation



Karan Fries:

- The Karan Fries were developed in India at the National Dairy Research Institute at Karnal.
- The breed was developed using Holstein (Friesian) and Tharparkar.
- This breed has black and white spots on the body, forehead, and tail of the cows.
- These cows give milk up to 9 liters to 10.50 liters per day, and they have the capacity to provide milk up to 3000 to 3400 liters a year.



Sunandini:

- In 1963, the bilateral project Indo-Swiss Project Kerala (ISPK) - now named Kerala Livestock Development Board (KLDB) - was started to develop a new breed of cattle through cross-breeding.
- Sunandini is a composite breed of cattle developed in India by crossing nondescript cattle with Brown Swiss, Jersey cattle and Holstein Friesian cattle.
- overall lactation yield of 3 200 kg.



Phule Triveni:

- Phule triveni, breed of cow is developed by Mahatma Phule Krishi vidyapeeth, Rahuri, Dist- Ahmednagar, Maharashtra.
- This breed consists of Holeystein friesian, Jersey and Gir combinations.
- It is cross bred and has average milk production of 3000 to 3500 litre per lactation with 3.8 to 4.2 % fat in milk.



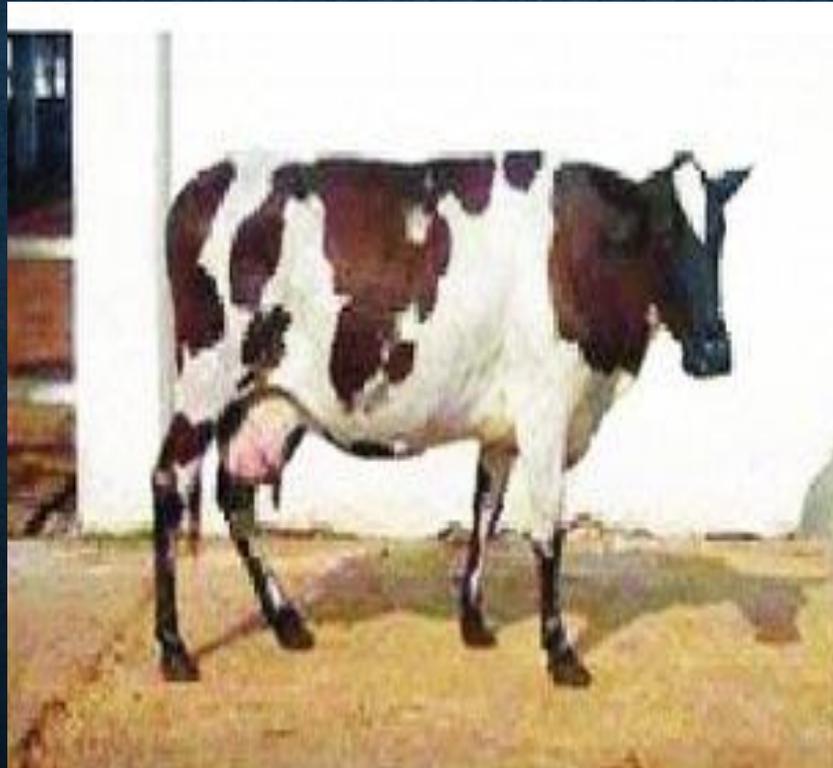
Vrindavani:

- Vrindavani cattle are recently developed synthetic crossbred cattle strain of India.
- It has the exotic inheritance of Holstein-Friesian, Brown Swiss, Jersey and indigenous inheritance of Haryana cattle.



Frieswal:

- Frieswal cattle is one of the crossbred strains having $\frac{5}{8}$ Holstein Friesian and $\frac{3}{8}$ Sahiwal inheritance, developed by ICAR-Central Institute for Research on Cattle, Meerut, in collaboration with Ministry of Defence.
- The project was started in 1987 for the evolution of a new crossbred national milch breed: Frieswal - (Holstein-Sahiwal), yielding 4,000 kg of milk with 4% butter fat in a mature lactation of 300 days.



Jersind:

- It is the cross between Red Sindhi and Jersey.

Jerthar:

- It is the cross between Jersey and Tharparkar.