BREEDS OF CATTLE
• National Dairy Research Institute (NDRI), Karnal

• Dr. Verghese Kurien. The National Dairy Development Board (NDDB) was created in 1965 Anand (Amul).

• Operation Flood, (1970 to 1996) for 26 years.
CATTLE

- EXOTIC/ *Bos taurus* (Hump less)

- INDIGINOUS/Zabu/ *Bos indicus* (Humped)
Indian Cattle Breeds

- Milch breeds
- Milch and draught breeds (Dual Breed)
- Draught breeds
Milch breeds
GIR

Curved horns turning back at the tips.

Proturding broad and long fore head

Ears are very large and pendulous, folded like a curled up leaf with a notch at the tip almost meeting at the end of the muzzle when stretched.

Colour varies from entire red with light patches to a mottled white and red or chocolate brown.
SAHIWAL

Horns are short and stumpy

Massive hump in males

Voluminous dewlap

Pendulous sheath

Various shades of reddish dun, fawn and roans with or without white markings.

Tail is long with black switch almost touching the ground.
**RED SINDHI**

- **Hump**: Well developed in bulls, sloping gradually forward but with an abrupt fall in the back.
- **Horns**: Thick at the base and emerge laterally and curve upward.
- **Dewlap**: Abundant in both males and females but thin and hangs well in nice folds.
- **Colour**: Distinct red, varying from dim yellow to dark red.
DEONI
Milch and draught breed
(Dual Breed)
**THARPARKAR**

- **Massive hump in males**
- **White or grey with darker extremities.**
- **Legs comparatively short and straight.**
KANKREJ

Horns curved upward and outward in a lyre-shaped fashion.

Ears are large, pendulous and open.

Males have medium and pendulous sheath.

Colour is silver grey, iron grey or steel black. In males, hump and hindquarters are always darker than the barrel.

Naval flap is prominent in females,
HARIANA

Long and narrow face with flat forehead and a well marked bony prominence at the centre of the poll.

Horns are short and horizontal.

Sheath is short and tight and naval flap is absent in bulls.

Colour is white and light grey.
Nimari
Gaolao
**ONGOLE**

- Hump is well developed and erect.
- Prominent forehead.
- Short horns.
- Dewlap is large, fleshy and hanging in folds extending to the naval flap.
- Popular coat colour is (glossy) white sometimes grey at extremities.
Other Dual Purpose breeds

- Dangi : Nasik
- Mewati (Kosi) : Alwar Bharatpur, Similar to Hariana.
- Rathi alwar and rajputana region of Rajasthan
Draught breeds
Kenkatha
Malvi
AMRITMAHAL

Hump is well developed and is carried slightly forward.

Horns are long and emerge from the top of the poll.

Head is long and tapering towards muzzle.

Bullocks slightly white and bulls dark, rusty and even interlace to some extent.

Cows are white

Udder is small and compact with hard and small teats.
HALLIKAR

Ears are tapering to a point.

Prominent forehead and furrowed in the middle.

Horns emerge near each other from the top of the poll, carried backward, each in a straight-line for nearly half their length, and with a gentle and graceful sweep, bend forward and slightly inward toward the tips. Horns touch the neck almost in front of hump.

Long face and tapers towards the muzzle.

Dewlap is thin and moderately developed.

Grey to dark grey colour with deep shading on the fore and hind quarters. Frequently light grey marks on the face, dewlap and under the body.
Kangayam cattle are usually grey or white and the males have black or very dark colour on the head, hump, neck and quarters.

Well developed hump

Horns are spread apart, nearly straight with a slight curve backwards.

Sheath is well tucked up to the body.

Dewlap is thin.

Short and stout legs with strong hooves.
The horns are thick at the base and taper to a fine point.

A distinct groove runs in the centre of the forehead from the nasal bridge to the centre of the poll.

The Tapti khillari is white with caroty nose and caroty hooves.

Muzzle is frequently mottled in colour.

The Nakali khillari is grey with tawny or brick dust colour over the forequarters.
BARGUR

- Thin and leafy ears
- Brown horns, eyes and muzzle
- Very hard horns.
- White red and white patches on the body.
- Tucked up sheath
- Short and strong legs.
- Brown hooves.
VECHUR

Hump is prominent in males.

Smaller in size, compact body and head is long with narrow face.

Horns are small, thin curving forward and downward.

Colour is light red, black or fawn and white. Skin is smooth and glossy.

Tail is long almost touching the ground.

Sheath is small and tucked up with the body.

Legs are short.
Other Drought Purpose breeds

- Nagauri (First type of drought cattle) : Rajasthan (Nagore)
- Bachaur : Bihar
- Kherigarh : (Lakhimpur Khiri)
- Punganur : AP
- Umblechery : TN
- Red Kandhari : MH
- Ponwar : (Pilibhit, Lakhimpur)
- Siri : Sikkim
Exotic cattle
Protruding eyeballs.

Double dished forehead and head.
HOLSTEIN FRIESIAN

Head: long and narrow and straight with slightly rounded shoulders.

Coat colour is predominantly black and white.
Large heads which are usually dished.

Distinctly brown.

Thick loose skin.
AYRSHIRE
## NEW CROSSBRED STRAINS OF CATTLE DEVELOPED IN INDIA

<table>
<thead>
<tr>
<th>S.n</th>
<th>BREED</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Karan Swiss</td>
<td>Brown Swiss X (Sahiwal, Red Sindhi) at NDRI, Karnal.</td>
</tr>
<tr>
<td></td>
<td>Breed</td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Karan Fries</td>
<td>Cross between Tharparkar X Holstein Friesian at NDRI, Karnal.</td>
</tr>
<tr>
<td>4</td>
<td>Sunandini</td>
<td><strong>Under Indo-Swiss project in Kerala</strong> Brown Swiss X non descript at Kerala.</td>
</tr>
<tr>
<td>5</td>
<td>Frieswal</td>
<td><strong>3/8 to 5/8 level of exotic inheritance of Friesian and Sahiwal</strong></td>
</tr>
</tbody>
</table>
Breeds of Buffalo
Murraah / Delhi Group
MURRAH

Hips broad, and fore and hindquarters are drooping.

Horns: short and tightly curved in a spiral form.

Coat colour: jet-black with white markings on tail.

Tail is long reaching up to the fetlocks with white switch.
NILI-RAVI

Peculiarity of the breed is the wall eyes,

Head is elongated, bulging at top and depressed between eyes.

Horns: small, tightly curved and circular in cross section.

Colour is black-brown with white markings on forehead, face, muzzle, legs and tail.
Uttar Pradesh group
Eyelids are generally copper coloured but some animals have light brown or black eyelids.

Head is comparatively small bulging between the horns.

Horns are black, curling slightly outward, downward before running backward parallel and close to neck and finally turning upward.

Two white lines "chevron" is present at the lower side of the neck similar to surti buffaloes.

Colour of the leg is wheat straw, which is peculiar to this breed.

Colour varies from blackish copper to light copper. Skin colour is grey or greyish black. Hairs are scanty.

Tail is thick and long, sometimes touching the ground and ending in a brown or white switch.
Gujarat group
JAFFARABADI

Forehead is very prominent, broad and convex.

Horns are heavy, emerge out by compressing the head, inclined to droop at each side of the neck and then turning up at points (ring-like).

Colour is black
**Surti**

- **Horns:** Sickle shaped, moderately long and flat.
- **Coat Color:** Rusty brown to silver-grey, skin is black or brown.
- **Peculiarity:** The breed has two white collars, one round the jaw and the other at the brisket.
- **Tail:** Moderately long.
**MEHSANA**

- Head is longer and heavier.
- Colour is black to grey.
- Horns usually sickle shaped with curve more upward than in surti breed and less curved than in Murrah breed but are longer and could be of irregular shape.
Central India group
**NAGPURI**

- **Face is long and thin.**
- **Horns:** long, flat, curved and carried backwards on each side of the neck nearly to shoulders.
- **Neck is somewhat long.**
- **Limbs are long and light.**
- **Coat colour is black with white patches on face, legs and tail tip.**
Southern India region
TODA

Horns set wide apart, curving inward, outward and forward

Colour is fawn and ash-grey in adults. Calves usually fawn and rarely grey.

Two white to light brown coloured chevron markings in the jowl and above the brisket.
<table>
<thead>
<tr>
<th>S. NO</th>
<th>BRRED</th>
<th>HOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bhadawari</td>
<td>Uttar Pradesh and Madhya Pradesh</td>
</tr>
<tr>
<td>2</td>
<td>Jaffarabadi</td>
<td>Gujarat</td>
</tr>
<tr>
<td>3</td>
<td>Marathwadi</td>
<td>Maharashtra</td>
</tr>
<tr>
<td>4</td>
<td>Mehsana</td>
<td>Gujarat</td>
</tr>
<tr>
<td>5</td>
<td>Murrah</td>
<td>Haryana</td>
</tr>
<tr>
<td>6</td>
<td>Nili Ravi</td>
<td>Maharashtra</td>
</tr>
<tr>
<td>7</td>
<td>Nili Ravi</td>
<td>Punjab</td>
</tr>
<tr>
<td>8</td>
<td>Pandharpuri</td>
<td>Maharashtra</td>
</tr>
<tr>
<td>9</td>
<td>Surti</td>
<td>Gujarat</td>
</tr>
<tr>
<td>10</td>
<td>Toda</td>
<td>Tamilnadu</td>
</tr>
<tr>
<td>11</td>
<td>Banni</td>
<td>Gujarat</td>
</tr>
<tr>
<td>12</td>
<td>Chilika</td>
<td>Odisha</td>
</tr>
<tr>
<td>13</td>
<td>Kalahandi</td>
<td>Odisha</td>
</tr>
</tbody>
</table>
Thank you