

# Yak

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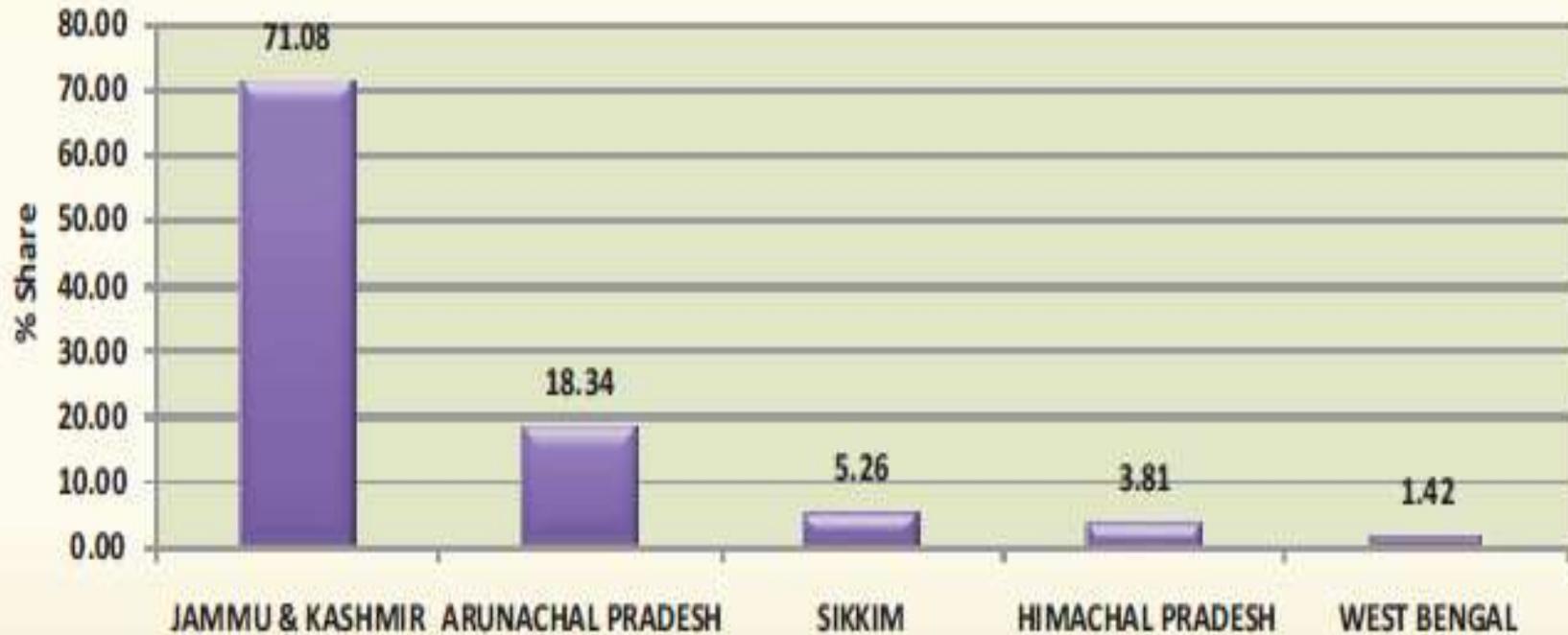
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- Phylum – Chordate
  - Class : Mammalia
  - Order – Artiodactyla
  - FAMILY – Bovidae



- Also called as “**Snow Camel**”
- China ranks **first** in yak population
- National research center of yak **Dirang Arunachal Pradesh**
- The domesticated yak name is known as “*Bos grunniens*”
- The total yak population **1.5 lacs** about 70% from J & K(largest yak bearing state)

## State-wise Yaks Population

Graph 3.24: Percentage share of Yaks Population- 2012



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- The yak may have diverged from cattle at any point between one and five million years ago.

## Mithuns and Yaks

- The total Mithuns and Yaks contributes around 0.07% of the Livestock population.
- The total number of Mithuns and Yaks together in the country as per 2012 Census is 0.37 million number.

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- It is known for its ability to withstand low temperature and capable to thrive on coarse fodder at high altitude where no other large ruminant can survive.
  - The yak is experimentally hardy animal and can withstand severe winter with snow having no adverse effect on it.



Types ; Categorized into 5 types based on their phenotypic characteristics.

1. Common
2. Bisonian
3. Bare back
4. Fore head
5. Long hair and white yak

- The colour of yak is **generally black**.
- It possess **long hair** (20-30cm) on belly, brisket and shoulder.
- The colour pattern of Indian yak is highly variable “**Nine colours**” have been established.
- Pure white and black are **2** main colours.



# Wild type yak

- Massively build body with “**drooping head**”
- Dewlap is absent
- The yak posses “**14 pairs** of ribs instead of 13 in all other Bovidae.
- They are high humped shoulders, stardy back and short sturdy limb.
- Wild and domestic yak rank among the most “**Surefooted**” mountain animals”



# Sexual behavior

- The yak attain sexual maturity in about **2-3** years of age.
- Age at puberty in female yak **38** months
- Age at first caving is **4-4.5** years.
- Gestation period is **285± 11** days.
- Seasonal breeders and **breeding season** is from “July-August” and **calving** takes place during March-May.
- Estrous cycle **21** days
- Duration of estrous **15±6** hrs
- Chromosome Number **60**



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# Cross Breeding of Yak

- Yak and local cow is limited in Sikkim

Yak X Local Cow = Joe

- Male Joe is sterile, female
- Joe yield more milk (3-4 liters) is more hardy and tolerate heat at lower temperature better than pure yak.
- Female Joe X Yak = Kukuya
- Female Joe X Cow Bull = Tey

# Production Characteristics

- The multipurpose bovid produce milk, meet, wool and transportation for high altitude living yak produce 1-2 L/day under field condition.
- Indigenous cheese produced is locally termed “Churpi”
- Hairs are used for making garments coarse hair are transformed into ropes door, Mets and carps.



# Adaptation of yak to high altitude

- Yak survive if annual mean temperature is below 5 c and average in hottest month is not above 13 c.
- This is ideal temperature range for optimum activity of yak for growth and production beyond this yak are under physiological stress.
- During long winter season when little feeds are available. It may be said that some ruminant species may help yak to sustain long winter months by producing additional bacterial mass.



- Another important finding of blood HB revealed that fetal HB in yak continue to persist in total hemoglobin make up the adult to extent of 42% even beyond 10 years of age.
- In other bovide it disappears in early stage.
- The fetal HB has greater affinity for O<sub>2</sub> and mat be considered as adoptive response in high altitudes where o<sub>2</sub> pressure is very low.

# Production Characteristics

- The multipurpose bovid provides milk, meat, wool, and transportation for high altitude living produces 1-2 kg milk/day under field conditions.
- Indigenous cheese produced is locally termed **“Churpi”**
- Yak meat is popular with tribal communities in hills.
- Hairs are used for marking garments coarse hair are transformed into ropes, door metes and carps.