

## Origin

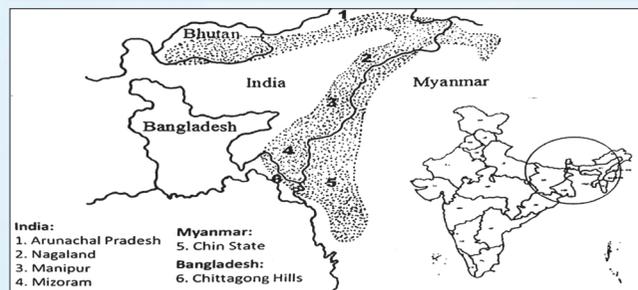
Mithun (*Bos frontalis*), a magnificent semi domesticated and unique bovine species, is believed to have originated more than 8000 years ago. This large ruminant belongs to the family Bovidae, order Artiodactyla, class Mammalia. It has 58 number of diploid chromosomes and phylogenetic tree constructed showed a close relationship between the mithun and the gaur (*Bos gaurus*) which in turn was found to be related to the banteng (*Bos javanicus*).

## Geographical Distribution

The highest concentration of mithuns in the world is spread over North Eastern (NE) region of India with Arunachal Pradesh having the highest mithun population. It is also found in parts of Southeast Asia viz. Bangladesh, Myanmar and Bhutan.

State	2003	2007	2012	2019
Arunachal Pradesh	1,84,343	2,18,931	2,55,555	3,50,154
Nagaland	40,452	33,385	35,028	23,123
Manipur	19,737	10,024	10,131	9,059
Mizoram	1,783	1,939	3,362	3957
Himachal Pradesh	-	-	919	
Jammu & Kashmir	-	-	57	
Total	2,46,270	2,64,279	2,98,264	3,86,293

Source: Livestock Census of India 2019



The mithuns are distributed in the altitude range of 300-3000m above msl. They prefer a cool climate and avoids bright sunlight. For this reason they retire to the deepest part of the forest during noon hours in search of water, especially salty water from streams where they quench their thirst.

## Morphological Characteristics

Mithun appears somewhat similar to that of Guar (Indian bison) but are smaller in size. Like Guar, they are strongly build, large sized fleshy animal with an average weight of 400- 650 kg. The characteristic feature of mithun lies in the head which has well developed, broad frontal bone with flat shaped face and from the front view, it appears like an inverted triangle from where two horns emerge from the lateral sides. The horns are thick at its base which extends mainly outward and gently curving inward and tapering into point at its tip. Horn colour varies from whitish yellow to salty black in most animals. Eyes are clear, ridged with pupil. The nasal bone is somewhat flattened with broad muzzle and nostrils opening wider than other ruminants.

The most conspicuous feature of mithun is its prominent dorsal ridge that is flat and tapering on the shoulder and extends up to the middle of the back. The shoulder muscle is well developed and most prominent in male mithuns. The tail reaches up to fetlock joint but never below it with the tail switch generally pure white or pure black or admixture of both. The feet are generally strong that supports the strongly built body. The neck is well developed and short but it is fleshy with well developed dewlaps which originates from the floor of the throat and terminates into the brisket.



The young mithuns are light to dark brown in colour, which darken with age. In adult mithuns, the most common colour is black with white markings and white with black marking. Other than these two, albino or pure black is also found. In most of the mithuns the typical body feature is the white stocking below the fetlock joint.

## Feeding and Management

- Mithun exhibits browsing habit and they browse on varieties of natural tree leaves, shrubs and bushes present in the natural vegetation.
- It is traditionally reared under free range forest ecosystem. Animals are let loose in the forest and they survive at the sole mercy of nature by grazing on natural fodder shrubs, herbs and other natural vegetation.
- It is raised as a community herd in designated forest areas specifically by the mithun society.
- Occasional salt lick is provided from time to time.
- The mithun of a village are recognized by the specific ear notch while individual owners have their own method of identification of their animals.
- During the seasons of cultivation, mithuns are usually confined into community enclosures which are erected with locally available wooden posts or bamboo where the quick growing shrubs, grasses, tree leaves and water sources within the enclosures meet the daily requirements of the animals throughout the period of their confinement.



## General Utility

Mithun is a valued animal in the life of the tribal people of Arunachal Pradesh, Nagaland, Manipur and Mizoram. It is believed to be the symbolic representative of peace and communal harmony. For the same reason, the 'Soulung' festival is observed annually by the Adi tribes of Arunachal Pradesh to commensurate the birth and arrival of mithun on this earth. The animal is sacrificed during such festivals at which time its meat is eaten .

Mithun is an indication of social status in which the richness of a person in the society is counted in terms of the number of mithuns that he possesses. In Nagaland, mithun is sacrificed at the 'Feast of Merit' which are a series of gradual feasts carried out over a period of several years. This permits a man to advance in social and economic position and raises his status in the society. Ownership of mithun confers prestige.

It is also used for payment of fine for social and legal obligations. The animal figures in system of exchange and for some groups it is a notable item of trade. The average cost of an adult male mithun may vary from Rs. 60,000-80,000 and may sometimes go up to Rs. 1,00,000. Most times too, it is also used to pay the bridal price.

In some parts of Arunachal Pradesh milking is done in mithun to fulfil the requirement of milk. But in the other NE states milking in mithun is hardly practiced with majority of the mithun owners having little knowledge about the milk production potential of the animal.



## Scope and Potential

Mithun could be an essential component of the sustainable animal production system of the region. They are of enormous economic and social importance in the life of the people of the region. This animal can be exploited and developed as very good meat animals besides improvement of their milk production potentiality. Higher butter fat percentage (8-10%) of milk provides avenues for production of value added milk products to fetch high price. Good quality leather can also be processed from mithun hide. Conservation and preservation of this unique species is therefore of primary importance as it is being threatened due to inbreeding, inter-species breeding with cattle and indiscriminate destruction of the habitat. The Indian Council of Agricultural Research established the National Research Centre on Mithun at Medziphema in Nagaland to undertake systematic studies on the scientific husbandry, breeding of mithun and its diversified uses.

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# MITHUN (*Bos frontalis*): THE UNIQUE BIO-RESOURCE OF NORTH EAST INDIA



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**ICAR-National Research Centre on Mithun**

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