

# CHARACTERISTICS OF MITHUN : A SEMI WILD ANIMAL OF NORTH-EASTERN REGION.

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The north-eastern region of India has non-humped siri cattle and also some bovine species such as Yak and Mithun. Mithun (*Bos frontalis*) is of economic importance and is primarily reared for meat in Arunachal Pradesh, Nagaland, Manipur and Tripura. The crosses of Mithun are also raised for milk. These animals are living in semi-wild conditions.

Mithun is a semi-domesticated bovine which subsists on grazing in the forest and hilly slopes. The animal prefers to remain in the forest during the day avoiding intense sun light. Due to its habitat, the animal suffers from a number of parasitic infestations. It likes to remain in cooler areas and thus stays in the forest for its day-grazing. It has a tendency to remain away from human dwellings. As per the latest census data, the maximum population of the species is in Arunachal Pradesh. Manipur comes next while Mizoram has a population of only a few hundred animals. However, the population of Mithun has shown a declining trend which indicates that there is an urgent need to promote conservation of this species in view of its economic importance in the North Eastern region of India.

The average animal weighs from 150kg- 400kg. The hump of the animal seems to be thinner and flat. The hairs are black and may have white patches. The coat colour below the knee is usually white. The pastern and the fetlock is white. The National Bureau of Animal Genetic Resources has undertaken to survey the status of this species. Detailed studies are being undertaken to estimate the geographical distribution, animal husbandry as well as the qualitative, quantitative characteristics and morphological parameters.

In contrast to cattle, the diploid chromosome number of this species is 28. The first pair of autosomes is sub-metacentric whereas the other 27 pairs are acrocentric. The sex chromosomes are submetacentric and metacentric respectively (X-SM, Y-MC).

Mithun red cells react with antibodies against cattle erythrocyte antigens. Mithun red cells fix complement efficiently and manifest haemolytic reaction with cattle blood grouping reagents. Some of the red cell antigens of Mithun behave similarly to those of cattle, showing dosage reaction indicating the presence of these antigens in homozygous condition.

The general conformation of Mithun resembles crosses of zebu cattle with *Bos taurus* breed. The detailed antigenic profiles of Mithun erythrocyte confirms the similarity in phenotypic appearance. The cytogenetic picture of Y chromosome of Mithun and *Bos taurus* shows a similarity. The detailed identification of the chromosome of the zebu and Mithun may throw further light regarding the species. The results of the blood typing of Mithun with thirty-one blood group reagents indicated the presence of certain phenogroups (antigenic complex, haplotypes) characteristic of cross of zebu with exotic breeds.

## REFERENCE

- Acharya, R.M. and Bhat, P.N. 1964. *Livestock and poultry genetic resources in India*.  
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*Editor's Note* : Our readers may be interested to know that the National Bureau of Animal Genetic Resources along with the National Institute of Animal Genetics was set up in 1984 to bridge a sort of gap between farm animals in use and wildlife by focusing on pure breeds of domestic animals which are becoming as or more endangered as wildlife species. Just as there is a wealth of biodiversity in the forests, there is a biodiversity of domestic animals, including 26 breeds of cattle, 8 breeds of buffalo, 40 breeds of sheep, 20 breeds of goats, 4 breeds of camels, 6 breeds of horses, and 18 distinctive breeds of poultry.

There are other forms such as mithun, yak, duck, geese, quails which are in a grey area between pure domestic and wild which the authors of this article have termed "semi-wild".

In consideration of the importance of diverse breeds of domestic animals, the NBAGR and NIAG were set up to evolve appropriate strategies for the documentation, conservation, evaluation and utilisation of all types of animal genetic resources and to undertake research which would advance understanding of the intrinsic genetic architecture of various animal breeds. The bureau has an action plan to evolve protocols for undertaking surveys, characterisation and evaluation of farm animal species. The bureau maintains a large data base and has researchers combing the country to find out remaining individuals of different breeds which might have remained pure.

Just as development and population have depleted the wildlife population, the same factors are responsible for depletion of pure breeds of domestic animals. Agriculturists are always looking for ways to increase production and "build a better cow." Cross breeding to make more productive animals has resulted in the near extinction of some breeds.

Mithun is neither a domestic animal nor a wild animal, although it is dismissed by some as domestic. There are questions now being raised about mithun which may result in knowledge that there is more to mithun than meets the eye.

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